AD-A052 818 ACADEMY OF HEALTH SCIENCES (ARMY) FORT SAM HOUSTON TE--ETC F/G 6/5
CENTRAL APPOINTMENT SYSTEM (CAS) REVISTED.(U)
OCT 77 D F ALEXANDER

UNCLASSIFIED HCSD-77-004 NL

1 OF 2
ADA
052818

Report HCSD-77-004

(2)

CENTRAL APPOINTMENT SYSTEM (CAS) REVISITED

Mr. David F. Alexander, MS, MA, DAC
Health Care Studies Division
Academy of Health Sciences, United States Army
Fort Sam Houston, Texas 78234

October 1977

Final Report.

Prepared for:

UNITED STATES ARMY HEALTH SERVICES COMMAND (HSPA)
Fort Sam Houston, Texas 78234

NOTICE

The findings in this report are not to be construed as an official Department of the Army position unless so designated by other authorized documents.

Regular users of the services of the Defense Documentation Center (Per DOD Instruction 5200.21) may order directly from the following:

Defense Documentation Center (DDC)
ATTN: DDC-TSR
Cameron Station
Alexandria, VA 22314

Telephones: AUTOVON (108) 28-47633, 34, or 35
IDS 107-47633, 34, or 35
Commercial (202) 27-47633, 34, or 35

All other requests for these reports will be directed to the following:

US Department of Commerce
National Technical Information Services (NTIS)
5285 Port Royal Road
Springfield, VA 22161

Telephone: Commercial (703) 557-4650

SECURITY PAGE (#)

REPORT DOCUMENTATION PAGE

READ INSTRUCTIONS BEFORE COMPLETING FORM

1. REPORT NUMBER: HCSD-77-004	2. GOVT ACCESSION NO.
3. RECIPIENT'S CATALOG NUMBER	
4. TITLE (and Subtitle): Central Appointment System (CAS) Revisited	5. TYPE OF REPORT & PERIOD COVERED: Final Report, May 1977 - October 1977
6. PERFORMING ORG. REPORT NUMBER	
7. AUTHOR(s): Mr. David F. Alexander MS, MA, DAC	8. CONTRACT OR GRANT NUMBER(s)
9. PERFORMING ORGANIZATION NAME AND ADDRESS: Health Care Studies Division (HSA-CHC), Academy of Health Sciences, US Army, Fort Sam Houston, Texas 78234	10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS
11. CONTROLLING OFFICE NAME AND ADDRESS: Commander, US Army Health Services Command, ATTN: HSPA, Fort Sam Houston, Texas 78234	12. REPORT DATE: October 1977
	13. NUMBER OF PAGES: 95
14. MONITORING AGENCY NAME & ADDRESS(if different from Controlling Office): 103p.	15. SECURITY CLASS. (of this report): Unclassified
	15a. DECLASSIFICATION/DOWNGRADING SCHEDULE

16. DISTRIBUTION STATEMENT (of this Report)

Unlimited distribution

17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report)

18. SUPPLEMENTARY NOTES

19. KEY WORDS (Continue on reverse side if necessary and identify by block number)

Active Army, Medical, Evaluation, Scheduling, Decision Making, Organizations, Appointments, Clinics, Net Assessment.

20. ABSTRACT (Continue on reverse side if necessary and identify by block number)

The purposes of this study were: (1) to identify the clinics within HSC MEDCEN/MEDDAC that are using CAS, (2) identify the individual MTF criteria used to exclude clinics from participation, (3) to effect a description of the operational characteristics of existing CAS, and (4) to establish if there is a demonstrable difference evident in workload of like clinics of different MTF as a result of CAS utilization.

DD FORM 1 JAN 73 1473 EDITION OF 1 NOV 65 IS OBSOLETE

UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

408 688

CENTRAL APPOINTMENT SYSTEM (CAS) REVISITED

SUMMARY

Ambulatory Care staff officers in the Ambulatory Care Division, Health Services Command (HSC), and the Surgeon General, Department of the Army (HQ DA) are interested in the validity of concept and status of the Central Appointment System (CAS) within selected medical treatment facilities (MTF) of the Army Medical Department (AMEDD). On the basis of findings of the HSC Inspector General, as well as comments reflected by the US Army Audit Agency (USAAA), it is apparent that all HSC MTF have not fully implemented the CAS. The purpose of the study was to reexamine the validity of the CAS within selected MTF of HSC. Data collection was obtained by multi-component surveys mailed to all HSC MEDCEN/MEDDAC, and a visit by the HCSD project officer to three Kaiser-Permenente Medical Centers in California. Data was transferred to punch cards by Systems Division, HCSSE, DMIS, HSC. Printouts were forwarded to HCSD for analysis. It was concluded that: (1) There some form of CAS being utilized in all reporting MTF; (2) A conflict exists between the commanders exclusion criteria and the applicable directives used to exclude clinics from participation in the CAS which can be reconciled by rewriting APC Model #1, and applicable regulations to read similar to AFM 168-4; (3) A description of the operational characteristics of existing CAS was only partially compiled; (4) Interrelationships that exist between CAS and selected clinics have been determined for each size MTF; (5) AMEDD guidance and directives do not address the interrelationships that should exist between the CAS and clinics and the CAS and the medical records activity; and (6) The results of returned questionnaires could not establish a demonstrable difference in workload as a result of CAS utilization due to inadequate data for analysis.

ACKNOWLEDGEMENTS

The project officer wishes to express his appreciation to the following individuals, without whose advice and assistance this study could not have been done:

COL J.E. Hertzog, MC, LTC C.S. Hembree, MS, LTC S.A. Balkema, AN, MAJ W.H. Bell, MS, MAJ D.C. Roberts, MS, Ms. H. Weatherford, DAC, and Mr. Master, DAC, HQ, Health Services Command; COL E.C. McSwain Jr., MS, LTC Robert E. Wright, MS, Ms. Kelley, DAC, Brooke Army Medical Center; Ms. Pat Pepin, DAC, Academy of Health Sciences Stimson Library; COL William G. Peard, MC, LTC James A. Hubbart, MS, COL Gary L. Bannister, MS, MAJ Aaron W. Schopper, MS, Dr. A. David Mangelsdorff, DAC, and COL Warren A. Parker, DC, Health Care Studies Division, Academy of Health Sciences, US Army; Mrs. Alva Wheatley, Assistant Administrator, Ms. Helen Buie, Central Appointment Supervisor, and Ms. Wanda Gaudin, Assistant Central Appointment Supervisor, Kaiser-Permanente Medical Center, San Francisco, CA; Ms. Lynn Smith, Central Appointment Supervisor, Kaiser-Permanente Medical Center, Santa Clara, CA; Mr. Joe Meresman, Assistant Administrator, Ms. Sandi Badley, Assistant Patient Appointment, Registration and Reporting System Coordinator, and Ms. Margaret Hernandez, Central Appointment Supervisor, Kaiser-Permanent Medical Center, Hayward, CA; LTC B.H. Corum, MS, USAF, Brooks AFB.

TABLE OF CONTENTS

TABLE OF CONTENTS

LIST OF TABLES

LIST OF APPENDICES

CENTRAL APPOINTMENT SYSTEM (CAS) REVISITED

1. INTRODUCTION.

a. Purpose. The purpose of this study was to reexamine the validity of the CAS within selected medical treatment facilities (MTF) of the US Army Health Service Command (HSC).

b. Background. Paragraph 6a, HSC Regulation 40-5, dated 26 July 1974, requires each MTF to implement the provision of HSC Ambulatory Patient Care (APC) models in accordance with the timetable prescribed by the APC Program document. APC Model #1, dated July 1974, provides guidance to MTF Commanders in the planning, operating, and evaluation of Central Appointment Systems (CAS) for ambulatory patients. Section 8, of the FY 76 APC Program document, dated July 1975, indicates that all MTF clinics (except those exempted by HSC) were to be incorporated within an operational CAS not later than the target date of November 1975. On the basis of findings by the HSC Inspector General, as well as comments reflected by the US Army Audit Agency, it is apparent that all HSC MTF have not fully implemented the CAS.

2. OBJECTIVES.

The objectives of this study were:

a. To identify the HSC MEDCEN/MEDDAC where the CAS was (and was not) currently being utilized.

b. To identify the clinics within HSC MEDCEN/MEDDAC that were using the CAS.

c. To identify the individual MTF criteria which were used to exclude clinics from participating in the CAS.

d. To effect a description of the operational characteristics of existing CAS.

e. To describe the interrelationships which existed between the CAS and selected outpatient clinics and between the CAS and the medical records activity.

f. To establish whether or not there was a demonstrable difference evident in workload of like clinics of different MTF as a result of CAS utilization.

3. METHODOLOGY.

a. Overview. Due to time constraints imposed upon the completion of this study, the data requirements were obtained via a multi-component survey mailed to each HSC MEDCEN/MEDDAC. Data were transferred to punch cards by Systems Division, HCSSE, DMIS, HSC. Printouts were then forwarded to HCSD

for analysis. Limited telephonic interviews of other military services were done. On-site visits to Kaiser-Permanente Medical Centers were made for collection of data.

b. Procedure.

(1) A letter from HSC (HSPA-A), subject: Central Appointment System (CAS) Revisited Study, dated 21 July 1977 (Appendix A), was mailed to all HSC MEDCEN/MEDDAC Commanders (TABLE 1) indicating a packet of survey questionnaires was being mailed to them by AHS, and stressing the command interest of HSC in this study. MEDCEN/MEDDAC in Table 1 are divided into categories used by HSC for reporting purposes.

(2) A letter from AHS (HSA-CHC), subject: Central Appointment System (CAS) Revisited Study, dated 21 July 1977 (Appendix B), with packet of survey questions (Appendix C thru F) attached, was mailed to each HSC MEDCEN/MEDDAC commander (TABLE 1). Appendix C is a Commander Questionnaire; Appendix D is a Chief, Patient Administration Division Questionnaire; Appendix E is a Chief, Administrative Support Branch Questionnaire; and Appendix F is a Clinic Chief Questionnaire. The clinic chief questionnaire was sent in six copies -- one for each of the following clinics: General Outpatient Clinic or Acute Minor Illness Clinic; Internal Medicine Clinic; General Surgery Clinic; Pediatrics Clinic; Obstetrics/Gynecology Clinic; Ears, Nose, and Throat Clinic. Each questionnaire had a cover letter of instructions for completion of the survey with it.

(3) Each questionnaire was a multi-component survey using data from the month of June 1977. Each questionnaire, upon completion, was to be returned to the HCSD project officer.

(4) Computer processing of the data was accomplished at HSC, DMIS.

c. Data Analysis. For the purpose of data consolidation and computer listings the CDC 6500 computer at Fort Leavenworth, Kansas, was used to run programs from the Statistical Package of the Social Sciences. Keypunching support was provided by the Health Care Support Element (HCSSE), HSC, for the cards that were necessary. Programmings were performed by individuals within the study agency.

(1) Descriptive analysis of reported data from MEDCEN/MEDDAC commanders was compiled from questionnaires at APPENDIX C.

(2) Descriptive analysis of reported data from chiefs, patient administration division, and chiefs, administrative support branch was compiled from questionnaires at APPENDIX D and E.

(3) Descriptive analysis of reported data from MEDCEN/MEDDAC clinic chiefs was compiled from questionnaires at APPENDIX F.

(4) The method used to address objective 2f was a stepwise multiple linear regression analysis. The 0.05 level of statistical significance was employed to determine if the utilization of the CAS in the selected clinics affected their productivity.

4. FINDINGS.

a. Of the thirty-eight commanders questionnaires, thirty-five responded (92%).

b. The results of the thirty-five returned commanders questionnaires showed each were utilizing some form of CAS.

c. Of the two-hundred twenty-eight clinic questionnaires, one hundred seventy-six responded (77%).

d. The number of clinics within HSC MEDCEN/MEDDAC that were using CAS reported by thirty-five commander respondents are shown in TABLE 2.

e. The results of the thirty-five returned commanders questionnaires listing criteria to exclude clinics from participating in the CAS are shown in TABLE 3.

f. A conflict existed between the results of the returned questionnaires and applicable directives, such as APC Model #1 (Appendix G).

g. Of the thirty-eight chiefs, patient administration division questionnaires, thirty-five responded (92%).

h. Of the thirty-eight chiefs, administrative support branch questionnaires, thirty-five responded (92%).

i. Findings of the operational characteristics of CAS are shown in TABLE 4.

j. Findings of the interrelationships which exist between the CAS and selected clinics and between the CAS and the medical records activity are shown in TABLE 5.

k. The results of the returned questionnaires could not establish whether or not there was a demonstrable difference evident in workload of like clinics of different MTF as a result of CAS utilization.

5. DISCUSSION.

a. The findings that all reporting MEDCEN/MEDDAC were in compliance to the requirement to have a CAS indicated acceptance of this concept. In the opinion question only one commander expressed himself as opposed to the practice.

While all were in compliance to having a CAS, extent of application varied.

b. An analysis of the Chiefs, PAD questionnaires showed that five MTF have all clinics on CAS.

c. Of the selected clinics surveyed, the majority were using the CAS, except the Outpatient Clinics in the large MEDDAC and medium MEDDAC.

d. The findings of the commanders questionnaires showed a wide variation of reasons used to exclude clinics. Many more reasons were being used for exclusion than were authorized by paragraph 5b and 5c, APC Model #1 (APPENDIX G).

e. There were no reasons found in current literature for exclusion of clinics from CAS. At Kaiser Medical Centers, physical examinations were successfully scheduled by the CAS. Literature showed where all clinics can be successfully scheduled by CAS.

f. In a briefing given by COL Powers (APPENDIX H), it was pointed out that APC Model #1 (APPENDIX G) needed to be rewritten.

g. The Air Force allows the commander flexibility to determine his own criteria to exclude clinics from participating in the CAS. Air Force Manual 168-4, as changed, reads, "Outpatient treatment may best be regulated by a combination of systems providing maximum patient accessibility to the levels of care matching the patient's needs. Users of central appointment systems have the responsibility of seeing that expeditious referral from clinic to clinic is discharged as a responsibility of the treatment facility. Depending on the size and local circumstances, drop-in clinics, block appointments, scheduled "sick call", and individual appointments, either on a central or individual clinic basis, may be used in any combination required to expedite patient management and care." In another area AFM 168-4 reads, "The service may be provided at a specific time or on an appointment system according to local policy." The Air Force commander can identify the individual MTF criteria used to exclude clinics from CAS.

h. The findings of the operational characteristics of the CAS in TABLE 4 show there were wide variation between the elements from the MEDCEN and different size MEDDAC. This study was not able to determine from available data what a normal or standard characteristic would be for a given size facility due to time restraints of the study.

i. The findings of the interrelationships which exist between the CAS and selected outpatient clinics and between the CAS and the medical records activity in TABLE 5 show there was a wide variation between the elements from the MEDCEN and different size MEDDAC.

j. Literature addresses the interrelationships that exist between the CAS and medical records activity in several publications. Current AMEDD guidance and directives do not address these relationships. Therefore, management indicators necessary to monitor these areas were absent.

k. The findings that this study could not establish whether or not there was a demonstrable difference evident in the workload of like clinics of different MTF as a result of CAS utilization was due to several reasons. The major reason for not being able to establish a demonstrable difference was due to incompleteness of data from returned questionnaires. More complete data would have allowed further analysis to have been performed.

l. Literature shows that justification for CAS can not be predicated on a reduction in cost or a demonstrable difference being evident in workload due to CAS utilization. The concept of CAS is not based on a workload difference as a result of CAS.

6. CONCLUSIONS.

a. The results of the thirty-five returned commanders questionnaires showed each MTF was utilizing some form of CAS.

b. The proliferation of subspeciality as well as disease or problem specific clinics is obvious from the responses. There was a total of 72 clinic names reported. There was a total of 667 clinics with 502 (75%) under CAS and 165 (25%) outside the CAS. From all MEDCEN/MEDDAC only 5 clinics were, when listed, always under CAS (Orthopedics, Dermatology, Well Baby, Gastroenterology, and Nutrition). There were 4 that when listed were consistently not within CAS (Occupational Therapy, Dental, Psychology, and Social Work). Of these Occupational Therapy is exempt and Dental and Social Work are eligible for exemption from CAS according to HSC APC Model #1.

c. Commanders responses as to the criteria that should be used to exclude clinics showed very few consistancies; lack of knowledge on the part of CAS to properly utilize the clinics, consultative in nature, and repeated visits were the most common. From the wide range of clinics that commanders have removed from CAS it is obvious that they do not feel that they can operate within the guidance of HSC APC Model #1.

d. Operational characteristics of CAS were so variable and divergent that no common model could be developed. If complete operational characteristics of all MTF CAS are needed, it would require a comprehensive systems engineering study.

e. The results of the returned questionnaires could not establish a demonstrable difference in workload as a result of CAS utilization. This can not be taken as a negative finding. The data were not of sufficient quantity or quality to assure that the lack of statistical difference in the clinics workload is or is not significant.

7. RECOMMENDATIONS.

a. MEDCEN/MEDDAC commanders have almost universally been unable to comply with current directives regarding CAS. Consideration should be given to delegating to them the authority to designate which clinics in their command can function best within and outside of CAS.

b. Since operational characteristics of CAS were so variable and divergent, no common model could be developed. If complete operational characteristics of all MTF CAS are needed, a comprehensive engineering study of each site would be needed. Such an expensive effort is not indicated and is not recommended.

c. The review of literature failed to show any data that indicated CAS made clinics more productive. A study to compare workloads would require up to 2 professional man-years to complete. It is doubtful that the multiple variables could ever be controlled or compensated for to the necessary extent to make such a study credible. It is not recommended.

8. REFERENCES

Stuart, Richard B., A Study of Appointment Scheduling Control for Outpatients, Final Report, Health Care Research Division, Academy of Health Sciences, US Army, January 1973.

Letter, Office The Surgeon General, DASG-DDD-H, Subject: "Improvement of Outpatient Health Care," dated 29 August 1972.

Letter, Office The Adjutant General, DAAG-PAP-A(M) (28 Aug 72) DASG-DDD-H, Subject: "Improvement of Outpatient Health Care," dated 6 September 1972.

Letter, Office The Adjutant General, DAAG-PAP-A(M) (10 May 73) DASG-HCO, Subject: "Guidelines for Central Appointment System," dated 15 May 1973.

Memorandum, Chief of Staff, US Army, Subject: "CONUS Outpatient Care System (COCAS)," dated 20 July 1972.

Letter, Office The Adjutant General, DAAG-PAP-A(M) (17 July 1974) DASG-HCO-T, Subject: "Improvement of Outpatient Health Care," dated 1 August 1974.

Letter, Office The Adjutant General, DASG-HCC-C(M) (27 Apr 77), Subject: "Improvement of Ambulatory Health Care," dated 4 May 1977.

Letter, HQ US Army Health Services Command, HSPA-A, Subject: "Activation of Central Appointments System (CAS) Study," dated 19 May 77.

Letter, Office The Surgeon General, DASG-HCC, (Non-Military Letter) dated 18 May 1977.

Headquarters, Department of the Army, Army Regulation 40-4, "Army Medical Department Facilities," 14 July 1967, with two changes.

Headquarters, Department of the Army, Pamphlet 570-557, "Staffing Guide for US Army Medical Department Activities," June 1974.

Headquarters, Department of the Air Force, Air Force Manual 168-4, "Administration of Medical Activities," 29 November 1971, with eight changes.

Headquarters, Department of the Army, Office of The Surgeon General, OTSG Regulation 10-2, "Organization of US Army General Hospitals Designated as Class II Installations or Major Class II Activities," August 1972.

Headquarters, US Army Health Services Command, HSC Regulation 40-5, "Ambulatory Patient Care," 26 July 1974.

US Army Audit Agency, Audit Report: MW 76-231, "Management of CONUS Medical Services," 30 April 1976.

Headquarters, US Army Health Services Command, "Ambulatory Patient Care Program, FY 76," July 1975.

"Briefing on the Central Appointment System," Headquarters, US Army Health Services Command, Professional Activities, Ambulatory Care Division, 15 June 1976.

A Report of Experience at Tripler MAC, "Planning, Implementing and Operating A Computer-Supported Central Appointment and Outpatient Data Collection System," July 1976.

Headquarters, US Army Health Services Command, APC Model #1, "A Central Appointment System" July 1974.

Austin, Henry M., "A Study of the Clinic Appointment System for the Confederate Memoraial Medical Center, Shreveport, Louisiana," MHA Thesis, Baylor University, August 1976.

Lindahl, James H., "A Study to Improve Medical Appointment Scheduling for the Inpatient At Research Medical Center, Kansas City, Missouri." MHA Thesis, Baylor University, August 1977.

Speer, William L., "A Study to Determine the Best Appointment System for Outpatient Clinics at Irwin Army Hospital, Fort Riley, Kansas." MHA Thesis, Baylor University, August 1977.

Schoffermən, Jerome, Et Al, "Use of the Telephone for Short-Term Follow-Up." Medical Care 15: 430-434, May 1977.

Shenick, William and Klein, Bonnie E., "An Approach to Reducing the Adverse Effects of Broken Appointments in Primary Care Systems: Development of a Decision Rule Based on Estimated Conditional Probabilities." Medical Care 15: 419-429, May 1977.

Levy, Rona and Clarovall, Viqui, "Differential Effects of a Phone Reminder on Appointment Keeping for Patients with Long and Short Between-Visit Intervals." Medical Care 15: 435-438, May 1977.

"Your Office and Staff, Passing Marks, But..." Medical Economics 104-107, 111-112, 114, 117, 122, 29 November 1976.

Canter, Eric W., "Timely Care for Scheduling Ills." Industrial Engineering 8: 36-39, September 1976.

Kilpatrick, William, "Centeral Scheduling of Patient Appointments." Dimensions in Health Service 53: 32-33, March 1976.

Holston, Charles A., "Central Appointment System for Outpatient Clinics." Hospital Management 104: 65-70, October 1967.

Watkin, Brian, "Outpatients." Nursing Minor 142: 42, 27 May 1976.

Stuart, Richard B., "Centralized Outpatient Appointment Systems: Delivering Ambulatory Care More Efficiently in Multi-Specialty Clinics," Military Medicine 141: 392-394, June 1976.

Madden, Edward E., "A Manual Centralized Outpatient Appointment System." Hospital Topics 54: 48-52, May-June 1976.

Singer, Mar E., Rossfeld, John E., and Von Hath, Michael C., "Centralized Appointment System Reduces Patients' Waiting Time." Hospitals 50: 151-158, 16 March 1976.

Wouall, Graham, "Assessing an Appointment." Journal of the Royal College of General Practitioners, 24: 876-879, December 1974.

Him, Thom Wai, "Treatment in Specialist Clinic by Appointment." The Nursing Journal of Singapore 14: 75-76, November 1974.

Drachman, Robert H., Zuckerman, Alone E. and Becker, Marchall H., "Computers and Ambulatory Health Services." Advances in Pediatrics 20: 101-131 (Chicago: Year Book Medical Publishers, Inc., ed. Schulman, Irging)

Rockhart, John F., and Herzog, Erick, "A Predictive Model for Ambulatory Patient Service Time." Medical Care 12: 512-519, June 1974.

Beck, James C., "An Administrative Record System for Ambulatory Facilities." Medical Care 12: 241-250, March 1974.

Giebirk, Gerald A., Et Al, "The Denver Areawide Health Data Management System." Medical Care 11: 170-177, March-April 1973 Supplement.

Baron, Robert, Et Al, "A Computerized Appointment System" College Health 20: 344-350, June 1972.

Nommess, Robert S., "An Operations Research Model of a Health Care Appointment System." MS Thesis, Naval Postgraduate School, September 1975.

Hall, Ronald K., "Outpatient Scheduling - A Simulation Approach." MS Thesis, School of Engineering of the Air Force Institute of Technology, June 1971.

Vanderzee, Peter J., "A Systems Study of the Central Appointment System at Walter Reed General Hospital." Intern Training Center Report No. USAMC-ITC-2-72-10, Red River Army Depot, Texarkana, Texas, July 1972.

Villeges, Eduardo L., "Outpatient Appointment System Saves Time for Patients and Doctors." Hospitals 41: 52-57, 120, 16 April 1967.

Doble, Henry P., "Streamlining Walter Reed's Central Appointment System." Hospital Topics 42: 41-46, October 1964.

"Appointments Fail to Shorten Clinic Waiting Time: Study." Hospitals 49: 184, April 1975.

Hurtado, Arnold V., Greenlick, Merwyn R., and Colombo, Theodore J., "Determinents of Medical Care Utilization: Failur to Keep Appointments." Medical Care 11: 189-198, May-June 1973.

Metach, Jonathan J., "An Intersystem Perspective for Ambulatory Care Program Management." Journal of Nursing Administration 5: 33-36, January 1975.

Mansdorf, Bruce D., "Allocation of Resources for Ambulatory Care - A Staffing Model for Outpatient Clinics." Public Health Reports 90: 393-401, September-October 1975.

Shepard, Donald S., and Moseley III, Thomas A. E., "Mailed Versus Telephoned Appointment Reminders to Reduce Broken Appointments in a Hospital Outpatient Department." Medical Care 14: 268-273, March 1976.

Ullman, Ralph, Et Al, "Study Provides Data for Planning Hospital-Based Primary Care." Hospitals 49: 75-80, 16 November 1975.

Knox, Jud H., "Relocating an Outpatient Service." Hospitals 49: 61-64, 1 August 1975.

TABLE 1

BREAKDOWN OF HSC TEST SITES USED IN THE CENTRAL APPOINTMENT SYSTEM (CAS) STUDY

TABLE 1

BREAKDOWN OF HSC TEST SITES USED IN THE CENTRAL APPOINTMENT SYSTEM (CAS) STUDY

MEDCEN

Brooke Army Medical Center
Fitzsimons Army Medical Center
Letterman Army Medical Center
Walter Reed Army Medical Center
Beaumont Army Medical Center
Eisenhower Army Medical Center
Madigan Army Medical Center
Tripler Army Medical Center

LARGE MEDDAC

Ft Benning MEDDAC
Ft Bragg MEDDAC
Ft Campbell MEDDAC
Ft Dix MEDDAC
Ft Hood MEDDAC
Ft Jackson MEDDAC
Ft Knox MEDDAC
Ft Leonard Wood MEDDAC

MEDIUM MEDDAC

Ft Belvoir MEDDAC
Ft Carson MEDDAC
Ft Ord MEDDAC
Ft Polk MEDDAC
Ft Riley MEDDAC
Ft Sill MEDDAC

SMALL MEDDAC

Aberdeen PG MEDDAC
Alaska MEDDAC
Ft Devens MEDDAC
Ft Eustic MEDDAC
Ft Harrison MEDDAC
Ft Huachuca MEDDAC
Ft Leavenworth MEDDAC
Ft Lee MEDDAC
Ft McClellan MEDDAC
Ft McPherson MEDDAC
Ft Meade MEDDAC
Ft Monmouth MEDDAC
Redstone Arsenal MEDDAC
Ft Rucker MEDDAC
Ft Stewart MEDDAC
West Point MEDDAC

TABLE 2

UTILIZATION OF CAS BY CLINICS

TABLE 2

UTILIZATION OF CAS BY CLINICS

NAME OF CLINIC	ON CAS	NOT ON CAS
Allergy	11	3
Internal Medicine	14	4
Gastroenterology	6	
Physical Medicine	3	1
Diet	19	1
Dermatology	26	
Well Baby	20	
Child Health Conference	1	
Pediatrics	27	3
Oncology	3	3
GI	3	
Hematology	2	4
Rheumatology	3	3
Gold Clinic	2	
Nephiology	2	2
Metabolic	1	
Thyroid	3	1
Neurology	11	3
Pulmonary	6	3
Nutrition	8	
Physicals	13	7
Counseling Pediatrics	1	
AMIC	5	7
Occupational Health	3	2
Speech	1	2
General Medicine	12	1
Hypertension	2	1
Radioisotope Endo	2	9
Renal	1	1
Family Practice	5	4
EEG	1	3
Medical Specialty	3	
TB	3	
Diabetic	2	
Cardiology	4	5
Occupational Therapy		10
Obstertrics	18	6
Gynecology	29	2
Urology	26	1
ENT	18	1
Head & Neck	2	
Audiology	15	3
Proctology	3	
General Surgery	1	

UTILIZATION OF CAS BY CLINICS (Continued)

NAME OF CLINIC	ON CAS	NOT ON CAS
Minor Surgery	1	
Vascular (Peripheral)	4	
Physical Therapy	6	17
Amputee	1	
Orthopedic	34	
Podiatry	20	2
Hand	1	
Joint	1	
Scoliosis	1	
Pediatric Orthopedic	2	
Ophth Screening	2	
Ophth Routine	24	2
Optometry	28	1
Well Women's	2	
Family Planning	1	1
Pap & Dysplosia	5	
Plastic Surgery	4	2
Pre/Post Op Surgery	2	
Colposcopy	1	
Infertility	1	
Neurosurgery	1	4
Chest	2	1
Otolaryngology	6	
Restorative Dentistry	1	
Oral Hygiene	1	
Outpatient Clinic & AIM	9	3
Dental		11
Psychology		12
Social Work		13

TABLE 3

SUMMARY OF COMMANDERS CRITERIA FOR

CLINIC EXCLUSION FROM CAS

TABLE 3

SUMMARY OF COMMANDERS CRITERIA FOR CLINIC EXCLUSION FROM CAS

	Clinic	Time Reported
1.	OB - repeated visits/waiting time	6
2.	Psychiatry - repeated visits	3
	- Consultative in nature	3
3.	General Medicine - repeated visits	2
4.	Radiology - same day referral and repeat visits	3
5.	Social Work Svc - consultative in nature	3
6.	Physical Medicine - consultative & repeat visits	1
7.	Physical Therapy - consultative & repeat visits	4
8.	Occupational Therapy - consultative & repeat visits	1
9.	Cardiology - physical limitations/location	2
10.	Neurology - physical limitations/location	4
11.	Family Practice -	1
12.	Oncology - personal, one-to-one	2
13.	Urology - can't and prefer not to	1
14.	All clinics in Class I Hospitals - too busy	1
15.	Internal Medicine - CAS lacks knowledge	1
16.	Gynecology - CAS lack knowledge/MD shortage	3
17.	Dystocia - CAS lacks knowledge	1
18.	General Surgery - CAS lacks knowledge	2
19.	Dermatology - less frequently a problem	1
20.	Pediatrics - due to workload	5
21.	Nuclear Medicine	1
22.	VD Clinic - privacy	1

TABLE 4

RANGE OF OPERATIONAL CHARACTERISTICS OF CAS

TABLE 4

RANGE OF OPERATIONAL CHARACTERISTICS OF CAS

	MEDCEN	LARGE MEDDAC	MEDIUM MEDDAC	SMALL MEDDAC
1. Method of CAS notification to medical records activity.	Comb*	Written List	Written List	Written List
2. Amount of advance notification by CAS to medical records activity.	24-48 Hrs	24-48 Hrs	2-48 Hrs	18-72 Hrs
3. CAS daily hours of operation.	8-12 Hrs	8-11 Hrs	8-10 Hrs	8-9 Hrs
4. Automated Message Recording System in operation during hours hours CAS is not operational.	YES	NO	YES	NO
5. Percentage of CAS appointments made by telephone.	80-99	74-99	70-99	50-99
6. Percentage of CAS appointments made by mail.	1-18	1-20	1-17	1-40
7. Method of CAS notification to clinics.	Computer Printout	Written List	Comb*	Written List
8. Number of telephones utilized in CAS.	8-15	6-16	7-15	3-8
9. Number of telephone lines utilized to call CAS.	6-31	6-28	5-25	3-12
10. Telephone numbers used by patient to call CAS.	1-8	1-8	1-9	1-5
11. In-house phone available for patient to call CAS.	YES	YES/NO	YES	NO
12. Automatic Call Distribution System available to CAS.	YES	NO	YES/NO	NO
13. Computer support available for CAS.	YES	NO	NO	NO
14. Shortest reappointment time available for patients.	1-6	0-9	1-9	1-9
15. CAS appointments June 1977.	6111-14831	3481-13028	3287-19137	1331-11504
16. Percentage of CAS phone calls not related to appointments.	9-20	1-60	10-65	1-45

*Computerized Printout, handwritten or typed list, telephone.

TABLE 5

RANGE OF INTERRELATIONSHIPS BETWEEN CAS AND MEDICAL RECORDS ACTIVITY AND CAS AND SELECTED CLINICS

TABLE 5

RANGES OF INTERRELATIONSHIPS BETWEEN CAS AND MEDICAL RECORDS ACTIVITY AND CAS AND SELECTED CLINICS

	MEDCEN	LARGE MEDDAC	MEDIUM MEDDAC	SMALL MEDDAC
1. Method of CAS notification to medical records activity.	Comb*	Written List	Written List	Written List
2. Required CAS advance notification to medical records activity.	24-48 hrs	24-48 hrs	2-48 hrs	18-72 Hrs
3. Required CAS advance notification to clinics.	Computer Printout	Written List	Comb*	Written List
4. Estimate of shortest reappointment time possible.	1-6	0-9	1-9	1-9
5. Required non-CAS advance notification to medical records activity.	24-48 Hrs	1-48 Hrs	2-48 Hrs	0-96 Hrs
6. Lead time required by medical records to have records in clinic.	17-48 Hrs	1-24 Hrs	1-48 Hrs	1-36 Hrs
7. % time medical records not available at medical records activity for clinic appointment by CAS.	5-25	2-25	5-25	1-78
8. Information to medical records in advance of appointment.	1-3	1-2	1-2	1-3
9. Unpublished telephone number for clinic to call CAS.	YES	YES	YES	YES

* Computer printout, handwritten or typed list, telephone.

APPENDIX A

HSC COMMAND LETTER TO FIELD ANNOUNCING CENTRAL APPOINTMENT SYSTEM STUDY

DEPARTMENT OF THE ARMY
HEADQUARTERS, UNITED STATES ARMY HEALTH SERVICES COMMAND
FORT SAM HOUSTON, TEXAS 78234

HSPA-A

21 JUL 1977

SUBJECT: Central Appointment System (CAS) Revisited Study

SEE DISTRIBUTION

1. Reference is made to DA letter, DASG-HCC-C (M) (27 April 1977), 4 May 1977, subject: Improvement of Ambulatory Health Care (Incl).

2. The Health Care Studies Division of the Academy of Health Sciences, US Army (AHS) is conducting a study of Central Appointment System (CAS) operations at MEDCEN/MEDDAC. The purpose of this study is to re-examine the validity of the CAS concept.

3. A packet of survey questionnaires will be mailed under separate cover by AHS. It is a matter of particular interest to this command that these questionnaires be disseminated in accordance with instructions provided, completed, and returned to AHS not later than the suspense date indicated.

FOR THE COMMANDER:

1 Incl
as

PHILIP A. DEFFER, M.D.
Brigadier General, MC
Chief of Staff

DISTRIBUTION:

CDR HSC MEDCEN/MEDDAC
less: CDR USA MEDDAC CANAL ZONE
CDR USA MEDDAC CARLISLE BARRACKS
CDR USA MEDDAC FT SHERIDAN

DISTRIBUTION:
COMMANDER IN CHIEF
US ARMY EUROPE AND SEVENTH ARMY
COMMANDERS
US ARMY JAPAN
EIGHTH US ARMY
US ARMY HEALTH SERVICES COMMAND

COPIES FURNISHED:
CINCPAC SUPPORT GROUP
HQDA (DACA-ZA)
HQDA (DACS-ZA)
HQDA (DAIG-ZA)
HQDA (DAMO-ZA)
HQDA (DAPE-ZA)
COMMANDERS
US ARMY TRAINING AND DOCTRINE COMMAND
US ARMY FORCES COMMAND
US ARMY RESERVE COMPONENTS PERSONNEL AND ADMIN CENTER
HQDA (DAAG-TCZ-B)

DEPARTMENT OF THE ARMY HQDA Ltr 40-77-4
OFFICE OF THE ADJUTANT GENERAL AND THE ADJUTANT GENERAL CENTER
WASHINGTON, D.C. 20314

DASG-HCC-C (M) (27 Apr 77) 4 May 1977

Expires 4 May 1978

SUBJECT: Improvement of Ambulatory Health Care

SEE DISTRIBUTION

1. References:

a. DA PAM 570-557, Staffing Guide for US Army Medical Department Activities, 26 June 1974.

b. Letter, DAAG-PAP-A(M) (17 July 1974) DASG-HCO-T, 1 August 1974, subject: Improvement of Outpatient Health Care.

2. It has been brought to the attention of HQDA that significant difficulties have been encountered in establishing and operating Central Appointment Systems in accordance with guidelines in reference a as directed in reference b.

3. Therefore, effective immediately and until further notice, a moratorium is established on the requirement for implementation of central appointment systems as directed in reference b. Existing central appointment systems will be continued; however, while further expansion is authorized, it is not required at this time.

4. Action is being taken to validate elements of the Central Appointment System concept, to devise methods for improving its operational effectiveness, and to investigate valid concerns on the part of the users of this system. A conclusion will be reached not later than 1 December 1977 and appropriate additional guidance will be published at that time. Pending publication of additional guidance, commanders are expected to continue to provide maximum patient accessibility to appropriate levels of care in an expeditious manner.

BY ORDER OF THE SECRETARY OF THE ARMY:

PAUL T. SMITH
Major General, United States Army
The Adjutant General

DISTRIBUTION:
COMMANDER IN CHIEF
   US ARMY EUROPE AND SEVENTH ARMY
COMMANDERS
   US ARMY JAPAN
   EIGHTH US ARMY
   US ARMY HEALTH SERVICES COMMAND

COPIES FURNISHED:
CINCPAC SUPPORT GROUP
HQDA (DACA-ZA)
HQDA (DACS-ZA)
HQDA (DAIG-ZA)
HQDA (DAMO-ZA)
HQDA (DAPE-ZA)
COMMANDERS
   US ARMY TRAINING AND DOCTRINE COMMAND
   US ARMY FORCES COMMAND
   US ARMY RESERVE COMPONENTS PERSONNEL AND ADMIN CENTER
HQDA (DAAG-TCZ-B)

APPENDIX B

AHS LETTER OF INSTRUCTIONS FOR COMPLETION OF QUESTIONNAIRES

DEPARTMENT OF THE ARMY
ACADEMY OF HEALTH SCIENCES, UNITED STATES ARMY
FORT SAM HOUSTON, TEXAS 78234

HSA-CHC

21 JUL 1977

SUBJECT: Central Appointment System (CAS) Revisited Study

SEE DISTRIBUTION

1. Reference letter, HSPA-A, US Army Health Services Command, subject: Central Appointment System (CAS) Revisited Study, dated 21 July 1977.

2. The Health Care Studies Division of the Academy of Health Sciences, US Army, as directed by the US Army Health Services Command, is conducting a study of all MEDCEN/MEDDAC concerning current operations of Central Appointment Systems (CAS). The purpose of this study is to reexamine the validity of the CAS within selected medical treatment facilities (MTF) of the US Army Health Services Command.

3. Four different survey questionnaires are attached in sufficient number to provide dissemination as follows:

a. Commander

b. Chief, Patient Administrative Division (PAD)

c. Chief, Administrative Support Branch (or Chief, Clinical Support Division)

d. Chief of the following clinics:

(1) General Outpatient Clinic or Acute Minor Illness Clinic

(2) Internal Medicine

(3) General Surgery Clinic

(4) Pediatrics

(5) Obstetrics/Gynecology

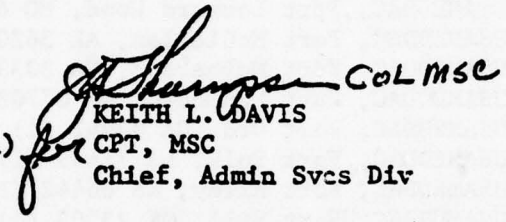
(6) Ears, Nose, Throat

HSA-CHC
SUBJECT: Central Appointment System (CAS) Revisited Study

4. It is requested that the questionnaires be distributed and that the surveys be completed and returned as soon as possible, but not later than 5 August 1977. Guidelines for completing the survey are provided in the introductory comments attached to each questionnaire.

5. POC is Mr. David F. Alexander, AUTOVON: 471-3116/4541/3331.

FOR THE SUPERINTENDENT:



KEITH L. DAVIS
CPT, MSC
Chief, Admin Svcs Div

4 Incls
1. Commanders Questionnaire (1)
2. C, PAD Questionnaire (1)
3. C, Admin Support Branch Questionnaire (1)
4. Clinic Chief Questionnaire (6)

DISTRIBUTION:

Commander, Brooke Army Medical Center, Fort Sam Houston, TX 78234 (1)
Commander, Dwight David Eisenhower Army Medical Center, Fort Gordon, GA 30905 (1)
Commander, Fitzsimons Army Medical Center, Denver, CO 80240 (1)
Commander, Letterman Army Medical Center, San Francisco, CA 94129 (1)
Commander, Madigan Army Medical Center, Tacoma, WA 98431 (1)
Commander, Tripler Army Medical Center, APO San Francisco 96438 (1)
Commander, Walter Reed Army Medical Center, Washington, DC 20012 (1)
Commander, William Beaumont Army Medical Center, El Paso, TX 79920 (1)
Commander, US Army Aeromedical Center, Fort Rucker, AL 36360 (1)
Commander, USAMEDDAC, Aberdeen Proving Ground, MD 21005 (1)
Commander, USAMEDDAC, Fort Belvoir, VA 22060 (1)
Commander, USAMEDDAC, Fort Benjamin Harrison, IN 46216 (1)
Commander, USAMEDDAC, Fort Benning, GA 31905 (1)
Commander, USAMEDDAC, Fort Bragg, NC 28307 (1)
Commander, USAMEDDAC, Fort Campbell, KY 42223 (1)
Commander, USAMEDDAC, Fort Carson, CO 80913 (1)
Commander, USAMEDDAC, Fort Devens, MA 01433 (1)
Commander, USAMEDDAC, Fort Dix, NJ 08640 (1)
Commander, USAMEDDAC, Fort Eustis, VA 23604 (1)
Commander, USAMEDDAC, Fort George G. Meade, MD 20755 (1)
Commander, USAMEDDAC, Fort Hood, TX 76544 (1)
Commander, USAMEDDAC, Fort Huachuca, AZ 85613 (1)

HSA-CHC
SUBJECT: Central Appointment System (CAS) Revisited Study

DISTRIBUTION (continued)

Commander, USAMEDDAC, Fort Jackson, SC 29207 (1)
Commander, USAMEDDAC, Fort Knox, KY 40121 (1)
Commander, USAMEDDAC, Fort Leavenworth, KS 66027 (1)
Commander, USAMEDDAC, Fort Lee, VA 23801 (1)
Commander, USAMEDDAC, Fort Leonard Wood, MO 65473 (1)
Commander, USAMEDDAC, Fort McClellan, AL 36201 (1)
Commander, USAMEDDAC, Fort McPherson, GA 30330 (1)
Commander, USAMEDDAC, Fort Monmouth, NJ 07703 (1)
Commander, USAMEDDAC, Fort Ord, CA 93941 (1)
Commander, USAMEDDAC, Fort Polk, LA 71459 (1)
Commander, USAMEDDAC, Fort Riley, KS 66442 (1)
Commander, USAMEDDAC, Fort Sill, OK 73503 (1)
Commander, USAMEDDAC, Fort Stewart, GA 31313 (1)
Commander, USAMEDDAC, Fort Wainwright, Seattle, WA 98731 (1)
Commander, USAMEDDAC, Redstone Arsenal, Huntsville, AL 35809 (1)
Commander, USAMEDDAC USMA, West Point, NY 10996 (1)

APPENDIX C

COMMANDERS QUESTIONNAIRE

COMMANDERS QUESTIONNAIRE

General Information

1. INTRODUCTION: The Health Care Studies Division, US Army Academy of Health Sciences, as authorized by the Commander, US Army Health Services Command (HSC), is conducting a study of the Central Appointment System (CAS).

2. PURPOSE: The purpose of this survey questionnaire is to document the viewpoint of the Commander regarding the CAS. The results of this survey may have a significant impact on future policy/guidance concerning the CAS.

Specific Information

1. A copy of this questionnaire will be provided to each MEDCEN/MEDDAC Commander in HSC.

2. It is requested that the survey be completed and returned as soon as possible, but no later than 5 August 1977.

3. When you have completed the survey, please follow the instructions for folding and stapling (as indicated on the reverse of the last page) before returning the survey through the mail.

4. Any questions requiring clarification or further explanation may be directed to Mr. David F. Alexander, AUTOVON: 471-3116/4541/3331.

COMMANDERS QUESTIONNAIRE

Respond by placing the number which corresponds to your answer in the space provided at the right.

1. Does your Medical Treatment Facility (MTF) use the Central Appointment System? 1. Yes 2. No. . . . . _____ (11)

2. Does your MTF have a formal orientation program for newly assigned physicians regarding the CAS? 1. Yes 2. No. . . _____ (12)

3. In a comparative analysis of the central appointment system and decentralized appointment system, do you believe:

   1. A central appointment system is superior to the decentralized system; 2. A centralized appointment system is equal to the decentralized appointment system; 3. A centralized appointment system is inferior to the decentralized appointment system, or 4. Other (please explain below)

   _____

   _____

   _____ _____ (13)

4. In your opinion, who should determine what clinics should be on CAS? That is, at what level should the final decision be made concerning whether or not the CAS will be utilized in the MTF?

   1. Department of the Army Surgeon General (AMEDD Level); 2. HSC (Major Command Level); 3. MEDCEN/MEDDAC Commander (Local Level) . . . . . _____ (14)

5. If existing policy/guidance were to be revised, should it be mandatory that some type of CAS be uniformly instituted in the AMEDD? 1. Yes 2. No . . . . . _____ (15)

6. Concerning the CAS, is it your assessment that: 1. All clinics should utilize the CAS; 2. Some clinics should utilize the CAS; 3. No clinic should utilize the CAS. . . _____ (16)

7. If the response to question 6 above was 2., please identify the clinics which should be excluded and briefly state the reason they should be excluded. If the answer to question 6 was 3., briefly explain the rationale for this choice.

(Use additional paper as required.) 1 (80)

APPENDIX D

CHIEF, PATIENT ADMINISTRATION DIVISION QUESTIONNAIRE

CHIEF, PATIENT ADMINISTRATION DIVISION QUESTIONNAIRE

General Information

1. INTRODUCTION: The Health Care Studies Division, US Army Academy of Health Sciences, as authorized by the Commander, US Army Health Services Command (HSC), is conducting a study of the Central Appointment System (CAS).

2. PURPOSE: The purpose of this survey questionnaire is to document the viewpoint of the Chief, Patient Administration Division regarding the CAS. The results of this survey may have a significant impact on future policy/ guidance concerning the CAS.

Specific Information

1. A copy of this questionnaire will be provided to the Chief, Patient Administration Division at each MEDCEN/MEDDAC.

2. It is requested that the survey be completed and mailed as soon as possible, but no later than 5 August 1977.

3. When you have completed the survey, please follow the instructions for folding and stapling (as indicated on the reverse of the last page) before returning the survey through the mail.

4. Any questions requiring clarification or further explanation may be directed to Mr. David F. Alexander, AUTOVON: 471-3116/4541/3331.

CHIEF, PATIENT ADMINISTRATION DIVISION QUESTIONNAIRE

Respond by placing the number which corresponds to your answer in the space provided at the right of each item.

1. Are all clinics in the MTF on the CAS? 1. Yes 2. No. . . _____ (11)

2. What method does the CAS utilize to notify personnel in outpatient medical records that patients are scheduled for appointment?

   1. Telephone, 2. Computerized printout, 3. Typed or handwritten list, 4. Other (explain below) . . . . . _____ (12)

   _____

   _____

   _____

3. What methods do clinics not on the CAS utilize to notify personnel in the outpatient medical records activity that patients are scheduled for appointment?

   1. Telephone, 2. Typed or handwritten list, 3. Other (if Other, please explain below) . . . . . _____ (13)

   _____

   _____

   _____

4. How far in advance (specify hours or days) of the patient's actual appointment is the input (i.e., listing of such appointments) from the CAS received by the medical records activity:

   a. In CAS appointed clinics? . . . . . _____ (14-16)

   b. In non-CAS appointed clinics? . . . . . _____ (17-19)

5. What is the <u>minimum</u> amount of such "lead-time" (re above) which you require to insure that the medical record is at the clinic for the patient's appointment? (Express your answer in hours.) . . . . . _____ (20-21)

6. Estimate the percent of time that a medical record is not available at the medical records activity to be sent to the clinic for a patient appointed through CAS. . . . . _____ (22-23)

   3 (80)

APPENDIX E

CHIEF, ADMINISTRATIVE SUPPORT BRANCH QUESTIONNAIRE

CHIEF, ADMINISTRATIVE SUPPORT BRANCH QUESTIONNAIRE

General Information

1. INTRODUCTION: The Health Care Studies Division, US Army Academy of Health Sciences, as authorized by the Commander, US Army Health Services Command (HSC), is conducting a study of the Central Appointment System (CAS).

2. PURPOSE: The purpose of this survey questionnaire is to document the viewpoint of the Chief, Administrative Support Branch regarding the CAS. The results of this survey may have a significant impact on future policy/ guidance concerning the CAS.

Specific Information

1. A copy of this questionnaire will be provided to the Chief, Administrative Support Branch at each MEDCEN/MEDDAC.

2. It is requested that the survey be completed and returned as soon as possible, but no later than 5 August 1977.

3. When you have completed the survey, please follow the instructions for folding and stapling (as indicated on the reverse of the last page) before returning the survey through the mail.

4. Any questions requiring clarification or further explanation may be directed to Mr. David F. Alexander, AUTOVON: 471-3116/4541/3331.

CHIEF, ADMINISTRATIVE SUPPORT BRANCH QUESTIONNAIRE

Respond by placing the number corresponding to your answer in the space provided to the right of each item.

1. What are the hours of operation of the CAS?

			For study Agency use	
Weekdays	_____ to _____		_____	(11,12)
Saturday	_____ to _____		_____	(13,14)
Sunday	_____ to _____		_____	(15,16)
Holiday	_____ to _____		_____	(17,18)

2. During the hours at which the CAS is not in operation, is there an automated message recording system to receive incoming calls? 1. Yes 2. No. . . . . _____ (19)

3. Estimate the percent of appointments, "on the average," made by the following methods:

   a. Telephone . . . . . _____ (20,21)

   b. Mail. . . . . _____ (22,23)

   c. In Person . . . . . _____ (24,25)

   d. Other (explain)_____. . . _____ (26,27)

4. Does the CAS receive information or feedback from the clinics using CAS concerning the number of patients that can be scheduled for any given period of time?

   1. Yes, from all clinics; 2. Yes, from some clinics; 3. No, not from any clinic. . . . . _____ (28)

5. What method do you use to notify the medical records room of the appointments made by the CAS? 1. Computerized print-out; 2. Handwritten or typed list; 3. Telephonic notification; 4. Other (please explain below) . . . . . _____ (29)

_____

_____

_____

_____

6. How far in advance of the day of appointment do you normally provide appointment information to the medical records room? . . . . . _____ (30)

7. What method do you use to notify the clinics of the appointments made by the CAS? 1. Computerized print-out; 2. Handwritten or typed list; 3. Telephonic notification; 4. Records alone are forwarded; 5. Other (explain below). _____ (31)

---

8. What is the number of telephones utilized in the CAS? . . _____ (32,33)

9. What is the number of telephone lines which are utilized in the CAS? . . . . . _____ (34,35)

10. How many telephone numbers may be used by a patient to call CAS? . . . . . _____ (36)

11. Is there a separate, unpublicized telephone number to be used by the clinics to call CAS? 1. Yes 2. No . . . . . _____ (37)

12. Is there an "in-house" phone system for use by patients which is automatically and directly connected to the CAS? 1. Yes 2. No . . . . . _____ (38)

13. Does the CAS utilize an Automatic Call Distribution System (ACDS)? 1 Yes 2. No . . . . . _____ (39)

14. Is the CAS operation supported by a computer? 1. Yes 2. No _____ (40)

15. Is there a CAS operated patient-reminder system in use at the MTF? 1. Yes 2. No . . . . . _____ (41)

16. If the answer to the above question is YES, what type of system is employed? 1. Direct telephone call by CAS personnel; 2. Mailed reminder from CAS; 3. Input provided to clinics for their use; 4. Other (explain below). _____ (42)

---

17. For clinics which use the CAS, is there a mechanism for responding to a request for an urgent (non-emergency) appointment request? 1. Yes, for all; 2. Yes, for some; 3. No, not for any. . . . . _____ (43)

18. Is the CAS system responsive to physician-directed reappointment requests by patients (e.g., if a physician instructs a patient to return at a specified time, can the patient request and receive the desired reappointment)?
1. Yes, all clinics; 2. Yes, for some clinics; 3. No, at no clinic. . . . . _____ (44)

19. For those clinics for which requested early reappointments are made, what is the shortest time (in days) for which a request for a reappointment will be honored?. . . . . _____ (45)

20. For those clinics using the CAS, may appointments be made for specifically requested care providers through the CAS?

1. Yes, at all clinics; 2. Yes, at some clinics; 3. No, at no clinic. . . . . _____ (46)

21. For the month of June, how many appointments were made through the CAS?. . . . . _____ (47-50)

22. In general, what is the estimated percent of phone calls or other inquiries made to the CAS which are not directly related to appointments (for example, calls or inquiries requesting general hospital or clinical information)? . . . _____ (51,52)

Continue on next page.

23. In the space provided below, list those clinics which utilize the CAS. Additionally, indicate in columns I, II and III, respectively, the following information:

I. The number of physicians assigned.
II. For what length of time (in minutes) are patients scheduled.
III. Whether or not non-reappointed patients are scheduled for the overall clinic or for individual care providers. (Use numerical coding indicated.)

Clinics Using CAS	I No. MDs Asgnd	II Duration of Patient Appointments (Minutes)	III Scheduling Specificity: (1. Overall Clinic 2. Indiv Care Providers)

(Use additional paper if required)

24. In the space below, list those clinics which do not utilize the CAS.

25. In the spaces below, list the number and grade of personnel working in the CAS. Include both civilian and military personnel who are assigned in both regular and excess status.

	Grade	Number Authorized	Number Assigned
a. Supervisory Personnel			
b. Clerks			
c. Messengers			
d. Others (pls explain)			

e. Additional data: If some of the personnel above do not work in the CAS on a full-time basis, or work in the CAS in an excess status, explain here (Indicate grade, number of hours worked per week, and status).

APPENDIX F

CLINIC CHIEF QUESTIONNAIRE

25. In the spaces below, list the number and grade of personnel working in the CAS. Include both civilian and military personnel who are assigned in both regular and excess status.

	Grade	Number Authorized	Number Assigned
a. Supervisory Personnel			
b. Clerks			
c. Messengers			
d. Others (pls explain)			

e. Additional data: If some of the personnel above do not work in the CAS on a full-time basis, or work in the CAS in an excess status, explain here (Indicate grade, number of hours worked per week, and status).

APPENDIX F

CLINIC CHIEF QUESTIONNAIRE

CLINIC CHIEF QUESTIONNAIRE

General Information

1. INTRODUCTION: The Health Care Studies Division, US Army Academy of Health Sciences, as authorized by the Commander, US Army Health Services Command (HSC), is conducting a study of the Central Appointment System (CAS).

2. PURPOSE: The purpose of this survey questionnaire is to document the viewpoint of selected Clinic Chiefs regarding the CAS. The results of this survey may have a significant impact on future policy/guidance concerning the CAS.

Specific Information

1. A copy of this questionnaire will be provided to selected Clinic Chiefs at each MEDCEN/MEDDAC.

2. It is requested that the survey be completed and mailed as soon as possible, but no later than 5 August 1977.

3. When you have completed the survey, please follow the instructions for folding and stapling (as indicated on the reverse of the last page) before returning the survey through the mail.

4. Any questions requiring clarification or further explanation may be directed to Mr. David F. Alexander, AUTOVON: 471-3116/4541/3331.

CLINIC CHIEF QUESTIONNAIRE

Respond by placing the number corresponding to your answer in the space provided to the right of each item.

1. Name of clinic: _____ (11)

2. Is your clinic utilizing the CAS? 1. Yes 2. No . . . . . _____ (12)

3. Are patients appointed to: 1. Individual health care providers; 2. The clinic at large; 3. Other (explain below)

   _____ ____ (13-15)

4. What is the normal length of time (in days) required for a new patient to obtain an appointment for your clinic? . . _____ (16,17)

5. What is the normal length of time (in days) required for a patient to be reappointed to your clinic? . . . . . _____ (18,19)

6. What is the maximum number of days into the future that a patient may schedule an appointment to your clinic? . . . . _____ (20,21)

7. What is the minimum number of days into the future that a new patient may obtain an appointment to your clinic? . . . . . _____ (22,23)

8. What is the number of hours per day that your clinic is operated?

		For use by study agency	
a. Weekdays	_____ to _____	_____	(24,25)
b. Saturday	_____ to _____	_____	(26,27)
c. Sunday	_____ to _____	_____	(28,29)
d. Holiday	_____ to _____	_____	(30,31)

Continue on next page.

9. Please provide the following clinic staffing information: (Precede each number by a zero if less than 10, e.g., "07")

Category of Personnel	Total No. Assigned		Man-Days Present During June 1977*	
Physicians (Mil or Civ)	_____	(32,33)	_____	(48,49)
Physicians Assistants (Mil or Civ)	_____	(34,35)	_____	(50,51)
Nurse Clinicians	_____	(36,37)	_____	(52,53)
Reg'd Nurses (Mil or Civ)	_____	(38,39)	_____	(54,55)
LPN/LVN	_____	(40,41)	_____	(56,57)
AMOSISTs (91Bs and/or 91Cs)	_____	(42,43)	_____	(58,59)
Secretaries, Receptionists, Typists, Clerks	_____	(44,45)	_____	(60,61)
Volunteers	_____	(46,47)	_____	(62,63)

*Include "borrowed" personnel time, if any.

10. Provide the following information regarding the patients treated or scheduled for treatment in your clinic for the month of June 1977. (Estimate where actual data are not available.)

a. Total number of patients treated. . . . . _____ (64-67)

b. Of those treated, what percent had appointments?. . . . _____ (68,69)

c. Of those who had appointments, what percent were "no shows?" . . . . . _____ (70,71)

ANSWER ITEMS 11 and 12 ONLY IF PATIENTS ARE APPOINTED TO YOUR CLINIC BY CAS.

11. Do you inform the CAS in advance of the number of patients that should be scheduled for your clinic? 1. Yes 2. No. . _____ (72)

12. If the answer to the above question was YES, how many days in advance is this information provided?. . . . . _____ (73)

13. Estimate the percent of time that a medical record is not available at the clinic at the time a CAS appointed patient arrives at the clinic. . . . . _____ (74,75)

_____ (80)

APPENDIX G

A CENTRAL APPOINTMENT SYSTEM

"AN AID FOR INNOVATION"

APC MODEL #1

A CENTRAL APPOINTMENT SYSTEM

AN AID FOR INNOVATION

Prepared as a requirement for the
United States Army Health Services Command
Ambulatory Patient Care (APC) Program

APC Model #1
HSC-PA-A
July 1974

TABLE OF CONTENTS

Adapted from Report No. 6, "A Study of Appointment Scheduling Control for Outpatients," Health Care Studies Division, Academy of Health Sciences, US Army, January 1973.

- - -

This model supersedes APC Models #1, #2, and #3, all dated June 1973.

SECTION I

GENERAL

1. Purpose. The purpose of this model is to provide guidance to medical treatment facility commanders in the planning, operating, and evaluation of central appointment systems for ambulatory patients.

2. Scope. This model is applicable to all Health Services Command medical treatment facilities (MTFs) that operate two or more identifiable ambulatory patient clinics.

3. Definitions.

a. Central Appointment System (CAS): A system for making appointments for all or most of the clinics of a medical treatment facility by clerks who are in one location, under central supervision. Patients make both initial and repeat appointments via the CAS, not directly with the individual clinics. Most of the appointments are outpatients, although clinic appointments can be made for inpatients as well.

b. Small MTF: An MTF with less than 9,000 outpatient visits per month.

c. Large MTF: An MTF with 9,000 or more outpatient visits per month.

d. Computer support: Batch-process, off-line support to the CAS by a computer, either in-house or installation-provided.

SECTION II

DICSUSSION

4. A centralized outpatient appointment system, serving as a central source of appointment-making and information-providing for ambulatory patients, if properly designed, can be an effective and efficient mechanism to insure that the health care provider, the patient, and his health record, arrive at the right place at the right time for a patient-provider encounter on an ambulatory basis with a minimum of waiting by either party. It standardizes appointment procedures for all clinics, thereby increasing staff

efficiency, and facilitating understanding and use of the system by both patients and staff. It frees clinic ancillary and administrative personnel from appointment duties. It promotes efficient use of clinic facilities. It maximizes productivity of health care providers. And it facilitates the collection of accurate outpatient workload data for management purposes. The purpose of this model is to insure that the CAS at each MTF is properly designed, operated, and evaluated, so that all of these goals may be reached with maximum efficiency, and with maximum patient and staff satisfaction.

SECTION III

RECOMMENDATIONS

5. Organization and control.

a. A Central Appointment Section should be established as a separate, identifiable entity under the Administrative Support Branch, Department of Clinics. Strong command emphasis is essential.

b. The following clinics may be excluded from a CAS: emergency room, immunization, radiology, pathology (laboratory), inhalation therapy, physical therapy, occupational therapy, and troop medical clinics. Operation of these clinics will be monitored by the Chief, Department of Clinics.

c. The only other clinics or services that should be considered for possible exclusion from the CAS are: psychiatry (neuropsychiatry), social work, dental, and physical examinations. HSC-PA approval will be required for any exceptions other than those listed in b. above.

d. The status of the CAS should be monitored by clinic chiefs, the Chief, Department of Clinics, the Chief, Professional Services, and the hospital commander. Reports that should be produced by the CAS to facilitate this should include:

(1) Appointment backlog, by clinic. (appointment waiting time in general should not exceed 10 working days)

(2) Workload, in terms of number of telephone calls, number of appointment calls, and number of appointments made per doctor and per clinic.

(3) Lost calls, all-trunks-busy time, and other telephone traffic data.

(4) Number of appointment clerks on duty each day.

(5) Patient no-show and cancellation rates.

e. On establishing a CAS, clinics should be required to submit a proposed schedule of clinic hours for approval by the Chief Department of Clinics, the Chief, Professional Services and the commander. Annex A contains data which may be used as broad guidance in determining appointment intervals for various clinics.

f. CAS controls should be established in writing to preclude altering of schedules by either individual physicians or clinic chiefs without the concurrence of either the Chief, Department of Clinics, the Chief, Professional Services or the hospital commander.

g. A CAS is a complex system; suggestions for improvement should constantly be sought from both clinic and CAS staff in a spirit of participative management.

h. A list of management indicators to assist in evaluating CAS operations is provided in Annex B.

6. Equipment.

a. Filing and appointment-making equipment.

(1) Most hospitals use a rotating, lazy-Susan file to circulate the appointment schedules and/or appointment making documents to the stationary clerks. The two major manufactures of this equipment in CONUS are Acme Visible Records, Inc., and VISIrecord Systems, Inc. Both firms are on a GSA Schedule, and both have systems analysts who can assist in designing the optimum system for a hospital, including development of specific equipment requirements, designing the appointment forms, and so forth. One must be certain to itemize all components and accessories, and consider the cost of supplies (forms, cards, books, etc.), installation cost, and building modification, if necessary, to accommodate an increased weight on the floor (equipment plus appointment files plus weight for clerks and chairs). Considering the constant increase in outpatient visits, and the relative uncertainty as to the exact percentage of visits than can ultimately be appointed, some capability for later expansion should be designed into every system.

(2) Acme Visible Records, Inc., which claims to be the largest such firm, manufactures rotating files called CENTFACS (CENTralized Random ACcess). These will accommodate books, cards, or pocket

frames with hinged pockets holding many forms. Pocket frames (similar to Kardexes) permit the use of multiple copy carbonless paper forms. They also can be used to hold clinic SOPs. CENTRACs can have multiple tiers, and should be motorized to reduce operator fatigue. The firm also offers large appointment schedule forms in tubs that can be mounted in a rotating table (their Veri-Visible system, used in many Navy hospitals). Acme Visible equipment is available on a GSA Supply Schedule, FSC Group 74, Class 7460. The address of the main office of Acme Visible Records is:

Acme Visible Records, Inc.
Crozet, VA 22932 (Telephone: (703) 823-4351)

There are 73 branch offices in various cities in CONUS.

(3) VISIrecord Systems, Inc., has available multi-copy VISI-cards mounted in either bins or rotary stands, both of which can be installed on rotary tables. VISIrecord equipment is also available on a GSA Supply Schedule. The address of the main office is:

VISIrecord Systems, Inc.
Division of Barry Wright Corporation
Copaigue, Long Island, NY 11726
(Telephone: (516) 264-4900)

Branch offices are also located in various cities.

(4) The largest rotary file known in appointment systems has 12 positions; larger installations will require two rotary files. For comments on small systems, see Annex C.

(5) It is essential that the appointment data generated by the CAS provide lists of appointment patients to the clinics and the doctors, and furnish a document to the Outpatient Medical Records Section (and to Radiology) that can be used as a charge-out card to pull the medical record (and the X-ray file, if needed) in advance of the appointment. Records should be pulled the night prior to the appointment. Appointment forms or cards should contain the following minimum information:

(a) Patient eligibility (ID card expiration date) (Phone check only).

(b) Name of the clinic.

(c) Doctor's schedule.

(d) Patient's name and grade (or of sponsor), and, if necessary, Mrs. or Miss, to be used in addressing dependents in the clinic.

(e) Patient's terminal digit file number.

(f) Patient's telephone number during the day.

(g) Notation as to the year of the last visit.

(h) Notation as to whether the X-ray film file is to be made available.

(i) Length of time of appointment.

(j) Date and time of appointment.

b. Telecommunications.

(1) To preclude problems with two different queues (and because patients often prefer to discuss medical problems by phone rather than at an open desk), all appointments should be made by telephone (or by mail). Each CAS rotary file should have only one telephone number for patients to call (but a line for every clerk), plus at least one line for communication between clinics and the CAS, and one line for cancellations and long-distance calls. Thus, the usual five-key telephone instrument can be used by a maximum of three clerks. Installations with four clerks or more should use a multiple button type of instrument, such as a "Call Director" (Western Electric Company) or a "Call Commander" (GTE Automatic Electric Company, 400 N. Wolf Road, Northlake, IL 60164).

(2) There should be sufficient telephone trunks providing service between the CAS and the serviced community to permit a busy signal rate of 6% or less. The average call will take 2.3 minutes and 25% of the calls will be for information only.

(3) Incoming calls should be distributed automatically to waiting clerks, using a rotary ring-down device for installations with three clerks, and an automatic call distribution system (ACDS) for larger ones. An ACDS will hold incoming calls (up to one per active line) if all lines are busy, and distribute them according to which CAS clerk has been free the longest, thus balancing workload among clerks. Recorder-announcers should be provided, with pre-recorded messages advising callers that all lines are tied up, and that a clerk will be with them as soon as possible. An ACDS

can cost from $15,000 to $25,000. Both GTE and the Bell Telephone System are experimenting with small, less costly call distribution systems using regular key-telephone circuits: the GTE system is called Call Intercept and Transfer System; the Bell system is known as the 4A Call Distributing System. Representatives of these firms should be contacted about details on these systems.

(4) Each system should have telephone traffic monitoring meters or lights to indicate number of incoming calls, the number of calls waiting, the total number of calls attempted, and the total number of calls serviced. From these figures the number of lost calls can be calculated, and need for increased service capability determined.

(5) An "electronic secretary" should be installed to record callers' messages during off-duty hours, as well as to record cancellations.

(6) The CAS supervisor should be able to communicate with all the CAS clerks and the clinics by telephone. A supervisor's turret should be provided that has position-status lamps, alarm lamps for malfunctions, and the traffic registers referred to above.

(7) A toll-free WATS (Wide Area Telephone Service) line for patients living outside the range of local calls should be provided, if possible.

(8) A desirable feature is "music-on-hold", which feeds music into the receiver while a patient is waiting for his call to be answered by a clerk, if all positions are temporarily busy.

(9) All incoming calls should be indicated by flashing lamps, not audible signals.

(10) CAS clerks should wear headsets in order to keep both hands free. A widely-used type is the Model MS 50, made by Pacific Plantronics, Inc., 385 Reed St., Santa Clara, CA 95050. Their lighter Star Set model is also available at a higher cost. Models are available with either headbands or spectacle attachments.

(11) In-house colored telephones for appointment-making by patients before they leave the building should be conveniently located in the clinics. Automatic card-dialing telephones will make it easier to dial if the phone is used to call the CAS.

(12) Installation communications and electronics specialists should be consulted in the design of the CAS telecommunications system.

(13) If computer support is available, see Annex C.

7. Facilities.

a. To permit the doctors to have easy access to the CAS (to modify schedules, check on their appointment lists, change clinic SOPs and give guidance to the clerks), the CAS should, if possible, be physically located in the immediate clinic area--or at least in the clinic or hospital building. It should not be marked with any identifying signs, however, in order to prevent patient in-person access.

b. The dimensions of the room for the CAS should accommodate the rotary file to be installed, allowing room for the supervisor to move completely around the wheel. For an 8-position installation, for example, a room 20 ft wide by 40 ft long would be a minimum requirement, to allow for an office for the CAS supervisor, and a partitioned-off lounge area. Future expansion should also be allowed for.

c. The work environment influences productivity and efficiency. Because of the demanding nature of the work of CAS personnel, their physical surroundings should be as pleasant as possible. There should be adequate heating in winter and air-conditioning in summer. There should be sound-proofed ceilings and upper walls and wall-to-wall carpeting on the floor. There should be cheerful colors, drapes on the windows, and attractive pictures on the walls. Modern furniture and artificial or real foliage plants would also help. A coffee pot would be appreciated by most clerks, although coffee cups should not be permitted at the wheel (to prevent spilling). A lounge should be provided for periodic breaks--either in a scheduled part of the CAS room or outside, but nearby. The exacting nature of the job makes rest periods (probably every two hours) essential, and these should be insisted upon. The need for nearby latrines is also important if excessive time loss for personnel needs is to be avoided.

8. Staffing requirements.

a. The following table indicates the number of appointment clerks necessary to operate a CAS with the assumption that one appointment clerk can handle an average of 115 appointment calls per day (this does not include calls for information only).

The table does not include the necessary position of supervisor, nor a messenger, who may or may not be necessary, depending on workload, number and dispersion of clinics, etc.

CENTRAL APPOINTMENT SYSTEM CLERK STAFFING

Outpatient visits per month for clinics suitable for CAS	Appointments made per month by CAS*	Number of appointment clerk positions needed	Actual staffing needed**
3,450	2,415	1	1
6,900	4,830	2	2
10,350	7,245	3	3
13,800	9,660	4	4
17,250	12,075	5	6
20,700	14,490	6	7
24,150	16,905	7	8
27,600	19,320	8	9
31,050	21,735	9	10
34,500	24,150	10	11
37,950	26,565	11	12
41,400	28,980	12	13

*Assume maximum of 70% of outpatient visits can be appointed (remainder are walk-ins, or do not use CAS for other reasons)
**Computation is based on manpower allowance factor of 1.11 which compensates for authorized absences. Additional individual derived from this computation may be called a senior appointment clerk and act as assistant CAS supervisor.

b. The above guide will have to be modified for a given CAS if it proves to be significantly more or less efficient than 115 appointments per clerk per day (computed on a 21-day month.) For 13 or more positions another wheel would be necessary.

c. The following grades are usually found in a CAS:

Supervisor	GS-6	(Asst Supervisor authorized for 8 or more clerks)
Senior appt. clerk	GS-5	
Keypunch operator	GS-4	(If used)
Appointment clerk	GS-4	
Messenger	GS-2	(One/6 or more clerks authorized)

However, it should be pointed out to position and pay classifiers that CAS appointment clerks should be regarded as more than just clerks or operators, but as persons trained by physicians to skillfully guide physically and emotionally ill patients into the health care delivery system, getting the patient to the proper clinic without error. This is a demanding task, calling for intelligence,

tact, knowledge of basic medical concepts (including some knowledge of anatomy and medical terminology) and hospital policies, and an intimate understanding of the procedures and operations of what may be 80 or more specialty and sub-specialty clinics. The individual should grasp details quickly, have a pleasant telephone voice, a good grasp of human psychology, be emotionally stable, and not readily upset by ill, worried, demanding, often hostile patients.

d. Depending on the magnitude of data collection and analysis of outpatient operational data, and of appointments by mail, a file clerk or clerk typist may also be necessary.

9. Training requirements for the CAS staff.

a. Orientation to the clinics. This should include visits to the clinics to be supported, a detailed briefing on each clinic's operations by the clinic chief or his assistant, and preparation of a written SOP for each clinic for use by the CAS clerks.

b. Development of and familiarity with clinic and doctors' schedules.

c. How to make and cancel appointments, including mail appointments.

d. How to use rotary file equipment.

e. How to use the headset and the telephone.

f. Patient eligibility briefing and the office to contact for answering complex questions.

g. Telephone courtesy.

(1) Guidance in this area may usually be obtained free of charge from local telephone company service representatives and PBX trainers. Bell Telephone Company booklets contain useful information on use of the voice.

(2) The following motion pictures are useful: The Extra Step (MF61-5264), and You in OPD (MF8-5539).

h. Certain CAS clerks can become specialized in certain specific clinics, thus being able to advise fellow clerks about them (but all clerks would still make appointments in all clinics).

i. It is recommended that a nurse, familiar with clinic operations, work in the CAS office for the first few weeks of operation to assist in orienting the CAS staff to clinic operations.

10. Orientation for clinic staff.

a. The hospital and clinic staff must know the following:

(1) How appointments are made through the CAS, so they can inform patients.

(2) How to create and update their clinic schedules, including arrangements for appointing follow-up patients (a form should be used for this, indicating the day (or range of days) desired, for the patient to use in communicating with the CAS), for short-lead-time appointments (several hours), for long-lead-time appointments (several months), for double-booking (with or without approval on each case), and for handling walk-in patients.

(3) How to cancel previously scheduled appointments.

(4) How to request absences from clinic sessions, and how to permanently change clinic schedules (some mechanism for approval of this by the Chief of the Department of Clinics should be established).

(5) How to provide guidance to CAS personnel about the screening and appointing of patients for their clinics. Telephone communication via nonpatient telephone or intercom lines should be encouraged.

(6) How to use CAS-generated management information (such as using appointment backlog data to advise their patients how soon they can expect to get an appointment).

(7) The importance of starting every clinic session on time to minimize waiting time of patients.

b. The CAS supervisor should conduct frequent liaison visits to clinic/service chiefs and staff physicians and other providers including house staff. Presentations concerning CAS procedures or problems at staff meetings should be considered. For very large installations special full-time liaison personnel--apart from the CAS supervisor--should be employed.

11. Patient and community information plan. The community served should be properly informed about the CAS, and this informational program should be repeated periodically as new personnel are assigned to the post, and as new problems surface. All available media should be used. Points to consider are:

a. Patients need to be constantly reminded to make appointments, and not just walk in.

b. Divulge only the initial number of a rotary ring-down system or an ACDS sequence, not all of the ones available. Explain to the public, however, that while there is only one phone number, there are 5 (or 6, or 8, or 10) phones actually in use at the CAS. Photographs of this in news media will help.

c. Prepare patients for the need for the CAS clerks to ask some screening questions about medical problems encountered in order to route patients to the proper clinic.

d. Provide a constant supply of information brochures. Have appointment slips (DA Form 8-97) and chained pens at in-house appointment phones.

e. Patients should be constantly urged to call to make cancellation (via a special number) if they cannot keep an appointment.

f. Adult patients should call for themselves, and should have the sponsor's SSAN available.

g. Patients should be encouraged to make appointments as far in advance as possible, and to make appointments for return visits before they leave the clinic.

12. Recommended operating procedures.

a. In certain clinics, where the return appointments are purely routine and stereotyped--as in the obstetric follow-up clinic--the use of self-service appointment sheets by the patients themselves should be considered. This should be supervised by the CAS.

b. If desired, the CAS could be required to assist in the preparation of the monthly medical summary report. To do this, the appointment lists generated by the CAS would be the basis for the data to be included on the report. It must be updated with data from all of the clinics who must furnish data on walk-in patients, late cancellations, and no-shows to the CAS. Those clinics not on the CAS must furnish the same information, as well as data on any patients they appointed themselves.

c. There should be provision made for handling short-lead-time ("modified walk-in") appointments by having clinics reserve time or specific doctors for such cases, having the CAS record these calls and phone them in to the specific clinics every half hour or so. This works well especially in Pediatric Clinics. Consider using a

telewriter type device to expedite notification of medical record room (and X-Ray) for record pull and delivery for short-lead-time appointments.

d. Long-lead-time appointment requests (for a time beyond the time the schedules are available) should be filed, and patients notified when the schedules are open.

e. Each physician or other health care provider should be furnished with his own copy of his daily appointment list.

f. All elements of the hospital that schedule extra-clinic duties for physicians and other health care providers--such as preparers of the gas chanber exercise for physicians and other AOD roster for optometrists--should provide schedules far enough in advance that appointments are not compromised. Timely notification to the CAS of physicians' or other health care providers' absence is essential.

g. Seek to have appointment schedules available at least two months in advance, with an additional week added each week.

h. Appointments should be made for individual doctors, not by clinic, or by blocks of patients, except in purely routine clinics, such as obstetric follow-up.

i. Self-referral by patients to specialty clinics should be encouraged, especially if there is a known, previously identified problem. CAS clerks can help screen and guide patients for this purpose, if properly trained by clinic personnel.

j. Hours of operation of the CAS should, as a minimum, extend from 0700 to 1900 hours, Monday through Friday, unless local experience suggests otherwise. On Saturday, hours of 0800 to 1200 are suggested.

k. Patient cancellations will average 5-10%. Every effort should be made to match standby appointment requests with cancellations. The use of chalk boards in CAS room will facilitate filling late cancelled appointments.

l. Appointment workload forecasts should be furnished to the Chief, Clinic Nursing Section, for clinic staffing purposes.

m. The importance of being prompt in seeing scheduled patients should be emphasized. Patients with appointments should be given precedence over non-emergency walk-in patients.

13. Operating policy outline for a CAS. A written policy and procedure guide for a CAS should be developed, using the following outline.

a. Purpose.

b. Definitions.

c. General policies.

d. Specific procedures:

(1) Preparation of clinic and doctors' schedules.

(2) Revision of schedules, temporary and permanent, including lead time required.

(3) How to make an appointment; form to use.

(4) How to cancel an appointment.

(5) When to close appointments.

(6) Routing and disposition of appointment schedule forms.

(7) Routing and disposition of appointment forms or lists (to the Outpatient Medical Records Section, X-ray, Patient Administration Branch, etc.)

(8) How to handle short-lead-time appointments (after appointments closed).

(9) How to handle long-lead-time appointments (over two months).

e. Responsibilities of chiefs of Administrative Services, Professional Services, Departments, Clinics, and CAS.

f. Responsibilities of clinic receptionists and secretaries, especially concerning late cancellation, no-shows, walk-ins, and other data collection tasks.

g. References.

h. Appendices: examples of forms used.

Users are invited to send comments and suggested improvements to CDR, HSC, ATTN: HSC-PA-A, Fort Sam Houston, TX 78234.

BIBLIOGRAPHY

1. Cronkite, Leonard W., "Computer Brings Order to Clinic Scheduling System", Hospitals 43:55-57, 16 April 1969.

2. Headquarters, Department of the Army, Army Regulation 1-17, "Communications with and Service to the Public", 18 December 1972.

3. Holston, Charles A., "Central Appointment System for Outpatient Clinics", Hospital Management 104:65-70, October 1967.

4. Johnson, Walker C. and Rosenfeld, Leonard S., "Factors Affecting Waiting Time in Ambulatory Care Services", Health Services Research 3:286-295, Winter 1968.

5. Mitchell, Michael B., and Gantreau, Faith, "Appointment Scheduling", Hospitals 44:58-59, 1 June 1970.

6. "Patient Cites 'Waiting Room Nausea'", letter, 18 June 1973; "A Palliative for 'Waiting Room Nausea'", letter, 30 July 1973, American Medical News.

7. Paulson, Isabel S., "A Mechanized Appointment System for Outpatient Clinics", Hospitals 40:80-88, 16 September 1966.

8. Plunkett, Daniel C., "Military Pediatric Outpatient Care Report of Experiences in a Large Army Hospital", Military Medicine 132:711-715, August 1966.

9. Rosenblut, Alan, et al, "OPD Waiting Time Reduced by Use of Individual Appointment System", Hospital Topics 50:48-52, March 1972.

10. Rosenfeld, Leonard S., Ambulatory Care: Planning and Organization, Health and Hospital Planning Council of Southern New York, Inc., New York 1971.

11. Stuart, R.B., A Study of Appointment Scheduling Control for Outpatients, Report No. 6, Health Care Studies Division, Academy of Health Sciences, US Army, Ft. Sam Houston, TX, January 1973.

12. Waiting in Outpatient Departments: A Survey of Outpatient Appointment Systems, Nuffield Provincial Hospitals Trust, Oxford University Press, London: 1965.

13. Walsh, John J., Benton, Jess L., Jr., and Arnold, Iola G., "Why Patients Break Appointments", Hospital Topics 45:67-70, February 1967.

14. Williams, Greer, "Kaiser: What is it? How Does it Work? Why Does it Work?", Modern Hospital 116:85, 1971.

15. Villegas, Eduardo L., "Outpatient Appointment System Saves Time for Patients and Doctors", Hospitals 41:52-57,120, 16 April 1967.

16. Vinci, James D., "Developing an Effective Appointment System for the Andrew Rader US Army Health Clinic", Medical Group Management 21:14-16, November-December 1973.

APPENDIX A

APPOINTMENT INTERVALS
(New Patient/Return Visit)

Clinic	DoD Standard[1]	Rosenfeld Standard[2]	Hospital A[3]	Hospital B[3]	Hospital C[4]	Hospital D[4]
Family practice/ general OPC	15		15/15	15/15	30/30	15/15
Internal Medicine	30	30-45/15		45/30		45/30
Gastroenterology	30		45-30	30/30		
Hematology	30		60/30	30/15		
Endocrine/metabolic	30		30/30	60/15		
Pulmonary disease	50		30/15			
Neurology	50		60/15	30/15		60/30
Dermatology	15	13/13	15/15	20/20	30/30	15/5
Allergy	40	15/5	30/20	60/30	60/15	60/15
General surgery	20	20/15	15/15	12/12	15/15	15/15
Orthopedic	20	20/15	30/15	15/15	15/15	
Podiatry	20		15/15	15/15	15/15	30/15
Urology	20	20/15	15/15	30/30	15/15	
Plastic surgery	30		20/10	20/20		
Opthalmology	20	15/15		30/30		30/30
Optometry	30		30/30	30/30	30/30	20/20
ENT	20	20/15		15/15		20/15
Pediatric(general)	15	20-30/15	15/15		10/10	15/15
Obstetrics	15	20/10-15	15/15			
Gynecology	20	20/15	15/15	20/20		15/15

1, 2, 3, 4 See notes

ANNEX B

MANAGEMENT INDICATORS

The following management indicators can be used to evaluate the effectiveness and efficiency of a central appointment system. Local modification may be required to take into account unique characteristics of a given CAS or its operating environment.

1. Waiting time for appointments (appointment backlog) should not exceed 10 working days.

2. A minimum of 70 percent of all outpatient visits should be appointed at least some time in advance of arrival at the clinic.

3. Each clinic should be able to book appointments at least six weeks in advance, if requested by health care providers.

4. Each primary care clinic with daily sessions should be able to handle "modified walk-in" appointments for the same day.

5. All appointments should be for individual health care providers, except for mass routine clinics, such as routine prenatal clinics.

6. All follow-up appointments should be made via the CAS.

7. The cancellation rate should not exceed 10 percent.

$$\text{(Cancellation rate} = \frac{\text{No. patients who cancel}}{\text{No. appointments made}} \times 100\text{)}$$

8. The no-show rate (patients who do not keep appointments without prior cancellation) should not exceed five percent.

$$\text{(No-show rate} = \frac{\text{No. patients who do not show up}}{\text{No. appointments made}} \times 100\text{)}$$

9. Each clinic should provide written instructions of SOPs for each appointment clerk.

10. The busy signal rate for telephone calls to the CAS should not exceed 6 percent.

11. The length of an average appointment transaction via telephone should not exceed 2.5 minutes.

12. The average length of all telephone calls to the CAS, including those for confirmation or information should not exceed 2.0 minutes.

13. A mimimum of 80 percent of patients surveyed by periodic questionnaire or other opinion instrument should be of the opinion that the CAS works well.

14. A mimimum of 90 percent of the professional staff surveyed by periodic questionnaire or other means should have a generally favorable opinion about the effectiveness and efficiency of the CAS.

15. Clinic personnel should spend less than 10 percent of their time in appointment-making duties.

ANNEX C

SPECIAL REQUIREMENTS

1. Small Medical Treatment Facilities (MTFs).

a. Rotating file equipment such as Acme Visible Records' CENTRACs may not be appropriate for small MTFs, although rotating tables containing just two tubs for large schedule forms are available from both Acme Visible Records and from VISIrecord Systems (see paragraph 6a.) A two-position CENTRAC is available from Acme Visible Records.

b. An Automatic Call Distribution System is not appropriate for small MTFs. Ordinary key system telephone equipment may be adequate for the smallest facilities, although a modified key system, such as the GTE Automatic Electric Company's Call Intercept and Transfer System, or the Bell System's 4A Call Distributing System should be considered for somewhat larger MTFs. Before a final decision is made concerning what type of telephone system to install, and whether it should be leased or purchased, coordination should be made with the installation communications--electronics (C-E) officer.

2. Computer--Supported Central Appointment System.

a. In general, in a computerized CAS the hospital or installation Data Processing Branch will automatically produce individual punched cards, pre-printed for each appointment interval for each doctor or other principal. The CAS clerks should use these cards to make appointments, entering in pencil the patient's name, SSAN, and other data such as that listed in paragraph 6a(5). Completed cards must then be keypunched (it is preferable to have this done by CAS keypunch operators, or CAS clerks cross-trained as keypunch operators, in order to speed processing and to reduce error rates.) As late as possible prior to the day of appointment the cards should be delivered to the Data Processing Branch, which prepares computer printouts of appointment lists for doctors or other principals and clinics, and duplicate cards to be used as charge-out documents in the Outpatient Medical Record Section and the Radiology Service.

b. CAS keypunch operations require a separate room, which should be sound-proofed to the maximum extent feasible if placed adjacent to the CAS office.

APPENDIX H

BRIEFING ON THE CENTRAL APPOINTMENT SYSTEM

15 June 1976

BRIEFING

ON THE

CENTRAL APPOINTMENT SYSTEM

15 JUNE 1976

HEADQUARTERS, US ARMY HEALTH SERVICES COMMAND
PROFESSIONAL ACTIVITIES
AMBULATORY CARE DIVISION

BRIEFING ON CENTRAL APPOINTMENT SYSTEM

The purpose of this briefing is three-fold:

1. To review observations made during the past year by the Army Audit Agency and Health Services Command Inspector General concerning deficiencies of hospitals in complying with OTSG and command guidance for the utilization of the Central Appointment System (CAS).

2. To review the historical events by which the CAS was imposed upon hospitals and to identify what are considered to be major errors of the implementation process which serve as the basis for continuing problems of inadequate compliance with the CAS guidance.

3. To recommend changes in official guidance for the utilization of the CAS.

AAA COMMENTS ON CAS

During the period of January 1975 to November 1975 the US Army Audit Agency conducted an audit of the management of CONUS Medical Services to determine how effectively and efficiently the US Army Health Services Command used its resources in providing health care in CONUS. Audit work was performed at HQ, HSC, and at seven medical treatment facilities. As a result of that audit, a major finding was rendered which stated: "Objectives and guidance were well defined for developing a Central Appointment System (CAS) at each MTF, but performance criteria did not provide accurate assessment of achievements or details on problem areas. MTFs experienced implementing and operating problems. The most significant and recurring problems outlined in the report were:

a. Continued reliance on decentralized appointment systems that either duplicated CAS or assumed workload applicable to CAS.

b. The low percentage of appointments made through CAS because of the small number of clinics participating or the limited time practitioners made available for CAS appointments.

c. Cancellation of many appointments because practitioners changed their schedules."

Based on their observations which resulted in the finding, the US Army Audit Agency made the following recommendations:

a. Expand reporting requirements to include the percentage of CAS appointments to total appointments; also require marginal-performing MTFs to submit special reports stating their specific problems and the actions planned by them to overcome the problems.

b. As problems are reported by MTFs, assess the need to identify and assign HSC staff assistance and/or resources to either quickly resolve the problems or to manage the actions required over a long-term effort to resolve the problem.

As an added item of interest the original report submitted by the Audit Agency, which was not adopted in the final analysis, offered the following summary: "We believe that rather than broad near compliance with CAS that a plateau has been reached at partial and inefficient operations. Further progress appears to hinge upon the course taken by HSC management. Probably the wisest course to pursue is to acknowledge the system's faults and to increase command pressure for implementation, improvement in operations and concept acceptance while at the same time accelerating the search for and evaluation of alternatives to the present CAS concept."

HQ HSC IG COMMENT ON CAS

In a memorandum for the Chief of Staff dated 23 March 1976 the Command Inspector

General noted major problems connected with the management and operation of a CAS as outlined in HSC Regulation 40-4 and the 1976 APC Program Document. His observations, based on review of reports rendered between March 1975 and February 1976, were as follows:

1. Clinics on CAS were utilizing a dual appointment system to include:

a. Clinic scheduling of all return visits.

b. Clinic scheduling of all appointments for special procedures such as proctoscopy.

c. Subspecialty scheduling of appointments for special categories of patients such as cardiac patients.

2. All non-exempt clinics had not been placed on the CAS and no request for exemption had been submitted to HSC.

3. CAS lacked adequate policies in areas such as:

a. Scheduling of patients for special procedures.

b. Providing available non-appointed time for clinic physicians to effectively manage emergent or urgent walk-in and referrals. This lack of free time results in excessive waiting time for appointed patients when walk-in or referral load is heavy.

4. Cancellation by individual physicians or clinic chiefs of scheduled clinics or changes in scheduled hours, without timely notification of the CAS. Less than a five-day notification to CAS of changes to scheduled clinics or appointment times places an undue burden on the appointment clerks who must attempt to contact and reschedule appointed patients.

5. Lack of evidence that clinic schedules, physician availability and appointment waiting times were being monitored by the key MEDDAC/MEDCEN

personnel responsible for the overall management of patient care.

The Inspector General's overall observation was that, "the success or failure of a CAS is not solely a function of availability of adequate resources. The willingness of the command and patient care providers to accept the concept of CAS as a means of improving accessibility to the delivery system is essential. Without this willingness there is little or no provider motivation to communicate their requirements to the CAS supervisor, identify to management the obstacles to successful operation of the system, or cease circumventing CAS with the dual appointment system."

These findings have a familiar ring and remind us that similar observations were made in the Comptroller of the Army analysis of the CONUS Outpatient Care Systems (COCAS) conducted during the spring of 1972. Why is it, then, that after four years of administrative pressure, many physicians have not yet accepted the CAS as an effective and superior mechanism for scheduling patient appointments? This lack of acceptance obviously is the underlying cause for the partial or non-compliance noted by the Army Audit Agency and the Command Inspector General.

The answer lies in the way the Army Medical Department went about implementing the CAS. A brief recounting of the historical events and the associated errors is necessary if one is to gain insight as to why so many physicians still oppose the CAS.

As far as can be determined, AR 40-4 and OTSG Regulation 10-2 contained directions for the use of a CAS as far back as 1967. We cannot determine who was responsible for this action, what the experience with CAS was of the individual or individuals who had the requirement placed in the regulation, and upon what

evidence of superiority the CAS requirement was based. Needless to say, efforts and progress during the next four years were far from optimal, and some hospitals seemingly completely ignored the requirement. OTSG appears to have been concerned about this, and there might even have been emerging doubts as to whether the CAS was the right way to go, because in January 1972, that office directed the Health Care Studies Division to prepare a protocol for studying the advantages and disadvantages of CAS versus decentralized appointment systems. So here we see both mechanisms for making appointments receiving fair and equal consideration. In April 1972, the Health Care Studies Division forwarded to OTSG a protocol entitled "A Study of Appointment Scheduling Control for Outpatients."

The OTSG multi-directorate Health Care Research Advisory Board approved the protocol in July 1972 but directed that it be modified to restrict the effort to determine the most effective and efficient method of operating a Central Appointment System. This was the first major mistake. If the study had been allowed to look at both centralized and decentralized systems, the usefulness of the latter system for certain types of appointments would have received equal consideration with the advantages of the CAS. Why OTSG made such an about-face is unknown, but it seems highly unlikely that it was on the basis of any studies conclusively proving the superiority of the CAS. It may be that OTSG experienced inexorable pressure from the Chief of Staff of the Army to enforce the CAS requirement which the Army Medical Department had placed in the regulation several years earlier.

So now we must turn briefly to the COCAS study, the analysis of our CONUS Outpatient Care System conducted by the Comptroller of the Army, and which influenced the Chief of Staff, Army. Following a Comptroller of the Army

(COA) presentation of The Surgeon General Command Analysis on 19 April 1971 to the Vice Chief of Staff, Army, the latter directed the Comptroller of the Army to analyze the workload at outpatient clinics at some of the larger posts to determine management practices which might be useful in improving overall efficiency. The study was deferred until 15 February 1972, and was completed by the end of May of the same year.

The qualifications of the COA surveyors in the field of health care delivery are unknown but it likely is a valid assumption that they were not experienced in the professional aspects of health care delivery and in particular had no personal experience with either centralized or decentralized patient appointment systems. During the briefing on the COCAS study, given to the Vice Chief of Staff on 2 June 1972, it was stated that "no attempt was made to assess the professional aspects of patient care management." The intentional ignoring of such an important aspect of the health delivery system raises serious questions about the overall validity of the conclusions of the study. By design the study was intended to evaluate only efficiency, management practices, and resources use.

The COA surveyors determined that "specialty chiefs and specialists dislike the idea of committing themselves to such a structured system as would exist with central appointments. They argue that their flexibility to adjust their own schedules to suit their and their patients' needs would be lost. The current appointment system tends to accommodate this view and results in the operation of two appointment systems." Nowhere is there to be found an in-depth presentation and careful analysis of the professional considerations underlying the desire of specialty physicians to control at least certain types of appointments.

This is so because the surveyors by their own design chose not to evaluate any of the professional requirements that must be considered for any appointment system which balances the legitimate professional requirements of the physicians against the legitimate service needs of the patients.

In their questionnaire responses to the surveyors, the physicians identified various factors which caused them to be dissatisfied. Some of these factors were:

Insufficient ancillary personnel

Inefficiency of ancillary personnel

Insufficient professional personnel

Archaic facilities

A very elementary analysis of such factors shows that they are quite capable of reducing physician productivity. Reduced physician productivity leads to increased waiting time for patients in attendance at clinic sessions, and extends the waiting time for appointments, new or return, because of the reduced number of patients seen per clinic session.

There was no evaluation concerning the impact and importance of these conditions in contributing to the prolongation of waiting times for patients and the diminished availability of appointments. The lack of depth of expertise of the COA surveyors in the field of health care delivery found full expression in their sum total of two recommendations concerning appointments, namely, (1) Standardize appointment systems Army-wide by following Army policy, and (2) Place complete control of this system under Chief, Department of Clinics.

Thus it was that the Chief of Staff of the Army, acting upon the recommendation of management surveyors who were not experienced in the field of health care, published a memorandum on 20 July 1972 in which TSG was directed to "prepare a

letter to appropriate installation commanders requiring appointment systems within hospitals to be standardized and centralized under the Department of Clinics by a specified date as required by AR 40-4. Exceptions to this policy will be granted only on an individual basis upon formal application by the MEDDAC commander through command channels to TSG." During August and September all hospitals were notified to implement a CAS which was to be under the control of the Chief, Department of Clinics.

The CAS study was completed by the Health Care Studies Division in January 1973. The study did not have to defend the superiority of the CAS, because a bureaucratic pronouncement had already designated the CAS as the system of choice. The study simply outlined the methods to be followed in establishing new CAS or upgrading those already in existence.

A TSG assessment team, visiting eight hospitals in February-March 1973, found that none were in full compliance with published directives. Similar findings were made by a special DAIG assessment team which visited eleven hospitals in March-April 1973. In response to these findings HQDA Letter 40-73-1, Guidelines for Central Appointment System, was issued on 15 May 1973. The material contained therein was developed from the information contained in the study completed by the Health Care Studies Division.

A little over a year later, because of continuing inadequate compliance, HQDA (Adjutant General) again issued a letter, 40-74-10, dated 1 August 1974, admonishing hospitals to comply with published directives concerning the operation of a CAS.

THE HEART OF THE PROBLEM OF NON-COMPLIANCE

Noncompliance is still prevalent because of the manner in which the Army Medical

Department has handled its physicians and because time and experience have proven that the CAS model was developed with defects in it. From the standpoint of physicians, there has been widespread, but not universal, adversary relationship from the beginning between specialty physicians and those who sought to impose the CAS upon them. No effort was ever made to win over the physicians by presenting to them persuasive data derived from a well run pilot program or a fair and impartial study of centralized vs decentralized systems. No attempt was made to present a reasoned treatise to the physicians explaining how they and their patients could benefit from the CAS. The physicians have not been treated as equal partners in the decision-making process, and their arguments, based on what they believe to be sound professional considerations, have been largely ignored. Those factors considered really important by physicians for increasing their productivity, namely, adequate numbers of competent ancillary personnel and adequate clinic facilities, remain to varying degrees unmet, and yet we hammer away at the physicians for not being on the CAS. What must we think about this situation in contributing to the retention of physicians in the Army?

Requiring the appointments of specialty physicians to be centralized under the control of the Chief, Department of Clinics, was undoubtedly a major psychological blunder. Specialists in general have tended to look down on the Department of Clinics, whose physicians traditionally have not been granted inpatient care privileges. The Department of Clinics physicians usually are not as well trained as specialty physicians, and therefore are not accepted into the inner circle. Appointments are the very foundation of specialty ambulatory care, but are of no major consequence in most of the activities conducted by the Department

of Clinics. To perceive giving up control of something as important as appointment scheduling to a department regarded as professionally inferior is a situation which many specialists have been unable to accept.

Physicians have not generally been confronted with a high degree of expertise on the part of those individuals entrusted to manage the CAS. Often these are company grade MSCs with field grades here and there. Many of the MSCs have had no previous experience with CAS, and yet are pushed into the front lines of management of a very complex and difficult system. The only thing most MSCs know about running a CAS is what they read in the model. We have never developed a training course for potential CAS managers, so the MSC officers are hardly to blame for their lack of skill. Little wonder then that physicians may feel reluctant to entrust their appointment-making system to junior MSC officers who lack the credentials necessary to qualify them as experts in this field.

Amplifying the ill effects of what may be less than adequate MSC management is the repetitive turnover of the managers themselves. The officers may be serving their first tour on active duty or may be assigned with no previous exposure to the CAS and its complexities. The CAS is much too important an operation to be managed in this manner, and we can anticipate the possibility of continuing doubts on the part of physicians until the CAS are managed by expert, stabilized managers.

The prime ingredient for success of a CAS is a hospital commander who is convinced of the system's superiority and uses his persuasive enthusiasm to influence his physicians to make a whole-hearted commitment to the CAS. Yet among this very important group of physicians it is difficult to find many who are completely convinced of the supremacy of the CAS. As a matter of

fact, some of whom we may consider our best and strongest commanders are openly opposed to the CAS. Why have we not been able to convince these leaders that the CAS is best?

Another factor which the CAS study and the CAS model did not accurately gauge was the effect of the infusion every year into our hospitals of a significant number of new speciality physicians fresh from the civilian setting which often may include making appointments through decentralized means. Every year we have to go to the mat with these doctors, and order them to cooperate with the CAS, and about the time they have developed a symbiotic relationship with the CAS they are ready to leave the Army and we start all over again with their replacements. That many of these physicians come from hospitals without CAS is considered to be a valid assumption based on an extensive review of hospital administration literature. There is an absolute dearth of articles concerning the use of CAS by civilian hospitals. Since it is a common tendency to publish articles on prominent successes, one is led to wonder why the literature is not replete with articles extolling the virtues of the CAS if it is in fact so superior. Certainly it is a fact that the American Hospital Association has never made any official pronouncement about central appointment systems. It must be perplexing to physicians coming into the Army as to why so much stress is placed on the CAS when they have seen so much less emphasis on it in their own civilian milieu. In summary on this point, the Army Medical Department should stop trying to drive physicians onto the CAS because it is a losing cause. Better the Army Medical Department should try to lead physicians onto the CAS through the development of a treatise which may win over the physicians and cause them to be willing coworkers with the CAS. If we are to be fair with physicians we should see to it that the CAS survives because of its inherent merits, and not because it has been given a position made impregnable by administrative decree.

DEFICIENCIES OF THE CAS MODELS

When they were written, the models incorporated information from the study of the Health Care Studies Division. They represented an honest and diligent effort to assist hospitals in developing or improving a CAS. Since the pronouncement had already been handed down that physicians would make their appointments through a CAS, the model tended to ignore some fundamental considerations which likely would have been examined if a study had been carried out comparing centralized and decentralized appointment systems. Because clinic physicians as a whole had been excluded from the decision to adopt CAS, so also the models tended to ignore the professional arguments of specialty physicians, and adopted a simplistic lumping together of all types of appointments. The models did not mandate that a CAS must provide service to both physicians and patients which is comparable or superior to the service already provided by the decentralized mechanism. It was simply assumed that such would be the case. The model did not accede to the rights of the physicians to define the requirements which the CAS must meet in order to provide an effective appointment procedure for various kinds of visits and then require the unequivocal assurance from the CAS managers that the CAS could indeed fully meet the professional requirements. The models did not require evidence from the CAS managers of unused, residual capacity in the CAS before any new clinics are placed on it. There was a serious lack of emphasis on the critical importance of ongoing trend analysis of the ability of the trunk lines to handle the telephone traffic. With the CAS acting as a funnel through which all telephonic appointment traffic flows, it is not difficult at all to foresee CAS becoming completely overwhelmed while people who do not understand the problem stand by demanding that more clinics be placed on the CAS in order to meet the requirements of published Army directives.

AD-A052 818 ACADEMY OF HEALTH SCIENCES (ARMY) FORT SAM HOUSTON TE--ETC F/G 6/5
CENTRAL APPOINTMENT SYSTEM (CAS) REVISTED.(U)
OCT 77 D F ALEXANDER

UNCLASSIFIED HCSD-77-004 NL

2 OF 2
ADA
052818

The models did not credit the effect of CAS clerks absenteeism, due to sickness, annual leave, or whatever else, and the malignant impact that this causes when we place all of our eggs in one basket and then drop it through insufficient staffing of the CAS. Hire lags and inadequate civilian personnel authorizations for the total work force requirement of the hospital add their pernicious effects to those caused by illness and annual leave. Since the CAS does act as a true funnel for telephone traffic, it must be fully staffed at all times or else it poses the real possibility of becoming a major impediment to the effective processing of appointment requests. Unless the Army Medical Department can guarantee every commander the ability to acquire full and continuous staffing of the CAS, including a pool of reserve CAS clerks who can be pulled in on a moments notice, it would do well to concentrate less on pushing physicians for more compliance with the CAS and bend its efforts instead toward developing mechanisms that can assure having CAS fully staffed at all times and also operated correctly and effectively by stabilized CAS managers who really know what they are doing.

The models badly underestimated the time spent by many CAS in providing information which does not lead to the making of an appointment. One of the basic concepts of the CAS is that it should serve as a centralized source of medical information. That the people look to it for this purpose is highly evident in the large number of calls for medical information which are received. These calls serve to reduce the time available for clerks to make appointments, and their effect on the handling of the appointment load must be closely evaluated by managers.

The models failed to predict that as the physician staff declines in numbers, so may the efficiency of the CAS decline, with efficiency being defined as the number of calls handled per clerk per day. The reason for this is that when

plenty of appointments are available, it takes very little time to arrange a date suitable to the patient. When appointments are scarce, due to a diminished number of specialists, who now also must direct significant time to work formerly accomplished by general medical officers, much time may be spent explaining to patients why appointments are not available. Here, too, is a place where expert management is required in order to advise the commander of the effect of declining efficiency and what it portends for the continuing ability of the CAS to handle the total number of telephone calls coming into it.

One of the conclusions of the CAS study was that the CAS promotes fuller utilization of available physician time. This same theme about increasing physician productivity is found in the Guidelines for Central Appointment System published by HQDA on 15 May 1973, and in the APC models. This conclusion is not valid. It is the control and monitoring mechanisms used in association with a CAS that can lead to improved physician productivity, by assuring physicians that their work effort is known on an individual basis to the command element. These controls also include rigid restrictions against the cancellation of appointments without approval from the Chief of Professional Services or the hospital commander. Such controls are every bit as applicable to decentralized appointment systems, so we should put to rest once and for all the myth that use of the CAS can improve physician productivity.

The bottom line for physician productivity is the number of patients seen per clinic session. We are told that specialty physicians are seeing an increasing number of same-day visits or walk-ins, and this makes sense. Because of the virtual disappearance of the general medical officers, we have developed

screening and triage programs, such as the AMOSIST Program, which refer patients directly to specialists. This factor, coupled with specialty physician diversion into primary health care formerly accomplished by general medical officers, their more frequent duty on POD rosters with subsequent compensatory time off and their more frequent duty on their own specialty call rosters, has had a destructive effect on the time which specialists can make available for appointments in specialty clinics. In these times of physician shortages and the need to maximize physician productivity, we must be absolutely certain that we use an appointment system which optimally supports flexibility in physicians schedules. Flexibility in the scheduling of specialists' work is most likely the key to our survival in the face of continuing rigid physician shortages.

THE AIR FORCE APPROACH

Before presenting a recommended course of action, I want to briefly review the present position of the Air Force. AFM 168-4, dated 11 November 1974, paragraph 3-2c, states the following:

> "APPOINTMENT SYSTEM. OUTPATIENT TREATMENT MAY BEST BE REGULATED BY A COMBINATION OF SYSTEMS PROVIDING MAXIMUM PATIENT ACCESSIBILITY TO THE LEVELS OF CARE MATCHING HIS NEEDS. USERS OF CENTRAL APPOINTMENT SYSTEMS HAVE THE RESPONSIBILITY OF SEEING THAT EXPEDITIOUS REFERRAL FROM CLINIC TO CLINIC IS DISCHARGED AS A RESPONSIBILITY OF THE TREATMENT FACILITY. DEPENDING ON THE SIZE AND LOCAL CIRCUMSTANCES, DROP-IN CLINICS, BLOCK APPOINTMENTS, SCHEDULED "SICK CALL," AND INDIVIDUAL APPOINTMENTS, EITHER ON A CENTRAL OR INDIVIDUAL CLINIC BASIS, MAY BE USED IN ANY COMBINATION REQUIRED TO EXPEDITE PATIENT MANAGEMENT AND CARE."

Perhaps there is something in the Air Force approach from which we can learn. The food for thought here is that the Air Force is not spastic about the process of how appointments are made. It looks at outcomes, namely, "providing maximum patient accessibility to the levels of care matching his needs," and

"expedite patient management and care." How has it come to pass that a sister service has not enshrined the CAS as the mandatory method for making most appointments? Whatever the reason, the Air Force approach is thought provoking.

A RECOMMENDED COURSE OF ACTION

It is recommended that the CAS be continued but that its implementation be modified, at least for the present. There should be no thought of abandoning the CAS because it has several very useful features and likely has major potential value for helping us phase into future fully computerized patient scheduling systems. However, after four years of experience, we have ample evidence that we can make the CAS the Vietnam of the Army Medical Department if we so desire. We also know that we have the power to force a pyrrhic victory, if that is what we want to do. Instead of either of these approaches, the following course of action is recommended:

First - we should declare at least a six-month and probably a one-year moratorium, a "stand-in-place," on the requirement for any more appointments to be added onto the CAS. This is because we need to look a lot more closely at just how effective internal CAS operations actually are at the present.

Second - we must come to accept as a cardinal principle that unless we can convince commanders and physicians that the CAS is superior and thus win their undivided commitment; the continuing insistence on total compliance can only be devisive, erosive of physician morale, and in the long run, counter productive to the long range goals of the Army Medical Department.

Third - We must seek to improve the image of the CAS in the eyes of the physicians by helping it to show what it really can do when operated continuously at optimum levels of efficiency. We must concentrate on the operation of the CAS itself and at this time suppress our concern about physician non-compliance.

Fourth - we need to develop a manual for CAS managers which lists problems common to all CAS and how to go about solving them. Additionally, there are certain problems related to institutional size, the presence or absence of computer support, and so forth, which also should be included in the manual. We need the communications people, for example, to help us define when a CAS is overloaded from a traffic standpoint and how to recognize it, so that the information can be placed in the manual. The manual must be a compendium of what we have learned about operational problems during the past four years, and what the most experienced people recommend must be done to successfully cope with the problems in order to prevent loss of operational effectiveness. We sorely need a more uniform system of operations and management of our CAS, rather than the variegated system which is our current inheritance.

Fifth - we need to develop a realistic solution to a problem which seems almost insoluble but which drastically affects CAS operations. This problem is CAS staffing. We simply cannot go on with the current instabilities of CAS staffing. Unless we can fully staff all authorized positions at all times with competent, well trained clerks, there can be little hope of developing that proficiency and capability which we hope will win the physicians' commitment. We have seen CAS staffed as low as 33% on some days due to a combination of various factors. We have seen patients used to staff a CAS, as well as volunteer personnel. We cannot afford this penny ante approach to staffing a link which is so critical between the physician staff and the community. We should decide once and for all that either the CAS is going to be run correctly and optimally, or get out of the business and turn appointments back to clinics. How can we ever hope to make any sensible judgments about the CAS' true capabilities unless we see to it that they are fully staffed one hundred percent of the time?

Sixth - the Ambulatory Care Division should work with the appropriate operations personnel to change the current staffing guide for CAS clerks. The CAS model cites appointments made as the key work factor. CAS supervisors almost uniformly agree that it is calls handled that is the more realistic work factor. Increasingly, calls may not lead to an appointment, but in handling such calls the CAS is still performing an important function for the hospital and for the community. If inappropriate calls for information are coming into the CAS, then the hospital management experts should devise ways to divert such calls to other more appropriate areas.

Seventh - the Ambulatory Care Division should rewrite the model on the CAS to incorporate various "lessons learned" during the past four years, and to introduce certain basic principles not included in the original models.

Eighth - the name of the Central Appointment System should be changed to Central Appointment Service. This is a psychological strategem directed at helping the physicians accept the concept that the CAS exists as a service to help them improve their own clinic operations.

Ninth - a well-thought-out, highly professional treatise directed at physicians should be developed, in which the potential benefits of CAS support are enumerated. It should not promise the improbable or unlikely, but should point out the mutual benefits which may accrue to both physicians and patients when physicians work in close harmony with a well run, optimally effective CAS. The treatise should include the concept that there is strong potential merit in having every newly arrived physician who may work in clinics personally visit the CAS and receive a briefing from the CAS supervisor.

Tenth - every hospital should be required to develop a system of accountability for the individual productivity of each physician working in the clinic setting. The requirement should be explained to physicians as being meant neither to harass them or impugn their integrity. It should be explained to

them that in this day of unrelenting patient demands for appointments or walk-in care, we are under close scrutiny by powerful forces outside the AMEDD to prove that we are effectively utilizing that most costly, and increasingly scarce resource, the physician. The requirement is intended to actually assist the physicians who really are giving their all to help us stay afloat, and we can assure them that in these times nothing speaks so eloquently as hard facts based on accurate accounting figures. So physicians who are doing their fair share should have nothing to resent from such a monitoring system. Physicians who may not be contributing their fair share may come to resent the system, because they will be exposed and can be properly dealt with. The professional evaluation of the appropriateness of each physician's productivity must be the responsibility of the command section of the hospital.

Eleventh - absolutely rigid restrictions must be enforced at all hospitals on the ability of physicians to cancel appointments. Such restrictions need not be unpalatable to physicians if the necessity for the requirement is explained, and the procedure conducted with fairness, understanding, and common sense.

Twelth - hospitals should be required to use a standardized form for all appointments. Generally, this would be expected to be the form used by the CAS. This requirement is consistent with the Comptroller of the Army recommendation made four years ago to standardize the appointment making system. Such standardization should not work against the professional interests of the physicians, and could be helpful in the collection of vital management information data which we urgently need to show how we are managing our scarce resources.

Thirteenth - we should strongly urge the commanders to engage in a

"no-holds-barred" session on the CAS at the Commanders Conference. Some of these commanders have been at the front lines with the CAS during the last four years, and their experience is invaluable. If they do not like the CAS they should be encouraged to "tell it like it is." What will hurt us the most is for the commanders not to tell us how they really feel deep down inside about the CAS. If the truth hurts, then let it be so. From what the commanders say we can learn a lot about whether we can ever realistically expect Army physicians to be won over solidly as a group to the conscientious support of the CAS concept.

Fourteenth - after a year of soul searching and seeking to determine if CAS really can be adequately staffed and expertly operated, and physicians can be persuaded that the CAS concept is superior, if there is still no significant improvement, the Army Medical Department should go the way of the Air Force and allow whatever arrangement a commander wants to adopt. However, utilization of the CAS to the greatest practical extent should still be considered the desired norm. There should be an admonition that no CAS can be abolished without approval of HQ, HSC, and that such permission would require a clear exposition of why it would be to the advantage of the Army Medical Department and the government to do so.

SUMMARY OF RECOMMENDATIONS

1. MORATORIUM OF UP TO A YEAR FOR ANY NEW APPOINTMENT ADDITIONS TO THE CAS.
2. ACCEPT THE PRINCIPLE THAT UNLESS THE UNDIVIDED COMMITMENT OF COMMANDERS AND CLINIC PHYSICIANS CAN BE OBTAINED, CONTINUING DEMANDS FOR TOTAL COMPLIANCE WILL BE COUNTER PRODUCTIVE.
3. CONCENTRATE ON MAKING THE CAS A HIGHLY EFFECTIVE OPERATION.
4. DEVELOP AN OPERATIONS MANUAL FOR CAS MANAGERS.
5. DEVELOP ABILITY TO FULLY AND CONTINUOUSLY STAFF CAS WITH COMPETENT, WELL TRAINED PERSONNEL.
6. CHANGE THE CAS STAFFING GUIDE TO USE CALLS HANDLED AS THE APPROPRIATE WORK FACTOR.
7. REWRITE THE APC MODEL ON THE CAS TO INCORPORATE LESSONS LEARNED DURING THE PAST FOUR YEARS.

8. CHANGE NAME TO CENTRAL APPOINTMENT SERVICE.

9. DEVELOP A TREATISE WHICH EXPLAINS TO PHYSICIANS THE POSSIBLE BENEFITS OF THE CAS TO THEIR CLINIC OPERATIONS.

10. REQUIRE HOSPITAL COMMAND ELEMENT MONITORING AND EVALUATION OF INDIVIDUAL PHYSICIAN PRODUCTIVITY IN THE CLINIC SETTING.

11. REQUIRE RIGID RESTRICTIONS ON PHYSICIAN CANCELLATION OF APPOINTMENTS.

12. REQUIRE EACH HOSPITAL TO USE A STANDARDIZED FORM FOR ALL APPOINTMENTS.

13. EXHORT THE COMMANDERS TO "TELL IT LIKE IT IS" AT THE COMMANDERS CONFERENCE IN OCTOBER.

14. AFTER A YEAR, IF NO SIGNIFICANT PROGRESS, ADOPT THE AIR FORCE APPROACH TO APPOINTMENTS.

THE CAS EQUATION

PHYSICIAN COMPLIANCE (COMMITMENT)	+	EFFICIENT CAS OPERATION	=	EFFECTIVE APPOINTMENT SCHEDULING

DISTRIBUTION LIST

DISTRIBUTION:

Defense Documentation Center (2)

HQDA (DASG-DCA) (3)

Dir, The Army Library (ATTN: ANRAL), US Army Service Center for the Armed Forces, the Pentagon, Washington, DC 20310 (1)

Dir, Joint Medical Library, Offices of the Surgeons General, USA/USAF, the Pentagon, Rm 1B-473, Washington, DC 20310 (1)

Dir, Joint Medical Library (AAFJML), Forrestal Bldg., Washington, DC 20315 (1)

USA HSC (ATTN: HSPA-A) (3); (ATTN: HSCM-R) (5)

AHS, Stimson Library (1)